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### THE MANAGEMENT OF THE PATIENT WITH A COLOSTOMY

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and

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The surgeon has not completed his job with his patient when he establishes an artificial anus and sends him home. He should have instructed the patient how to care for his colostomy or he should send instructions home with the patient as to the care and management of the colostomy. These instructions should be explicit so that the patient and his family will have a clear understanding of the care that is necessary. The patient should consult his physician whenever he has difficulties, and you as his physician should be able to make helpful suggestions and thereby aid in maintaining the morale of the patient. You should explain to the patient that a colostomy is necessary in many cases and in his particularly for him to be well. Unless the physician bolsters his morale, the patient is likely to think that he has an unbearable condition, but if you will give him proper guidance, it need not be a nuisance or as unpleasant as commonly believed. With proper care, the bowel can be regulated so that there is no unpleasant odor about the patient's body or clothing, and the movements can be satisfactorily controlled to come at a convenient time. Instruction to the patient should begin in the hospital, and the patient should leave the hospital partially trained in caring for his disability.

I do not advise the use of fancy colostomy belts or bags, but suggest that the patient use an elastic abdominal binder or supporter. The best garment I have been able to obtain is a prewar, washable, elastic pantie. I have hopes that it will return to the market shortly. This garment is inexpensive, and so the patient can have several on hand. It

could be improved by having a zipper down the center or a zipper on each side.

The dressing used to cover the colostomy consists of facial tissue or a similar toilet tissue applied directly to the stoma; it is not rough like gauze, and it is less expensive than cotton and has the same absorbent qualities. Over this is placed a pad made of cellu cotton. Neither of these dressings will cause stoppage when disposed of in the toilet. If the patient watches his diet and irrigates the bowel properly at regular intervals, this pad may be small and will not make an obvious, bulky dressing. A piece of oiled silk or waxed paper slightly larger than the pad should be placed between the pad and the supporter. This will prevent moisture from mucus, which is frequently present, from soiling and staining the outer garment. If the patient has an unhealed posterior wound, as many of them do for some time after operation, this garment will also keep this dressing in place. Whenever the patient feels that there is any soiling, and after a few weeks the patients do know when soiling is going to take place, he can step into a toilet and turn down the belt and dispose of the dressing. Reserve dressings should be carried by these people. If the patient has a sacral anus, this garment is also suitable for him to wear. Some patients prefer a sacral anus, but I believe that an abdominal anus is more desirable since it is easier to care for and the patient can see the abdomen and keep it clean.

None of us would choose to have a colostomy if it could be avoided, but as physicians we should never say to our patients, "I would rather die than have a colostomy." Statements of this type deter many patients from having timely operations. Nearly all patients who have cancer of the colon or rectum eventually have some operative procedure, and if the surgeon could see them early instead of late, he might be able to remove their cancer and possibly save their sphincteric control. With proper preoperative preparation and the use of sulfa drugs, it is now safe to attempt resections

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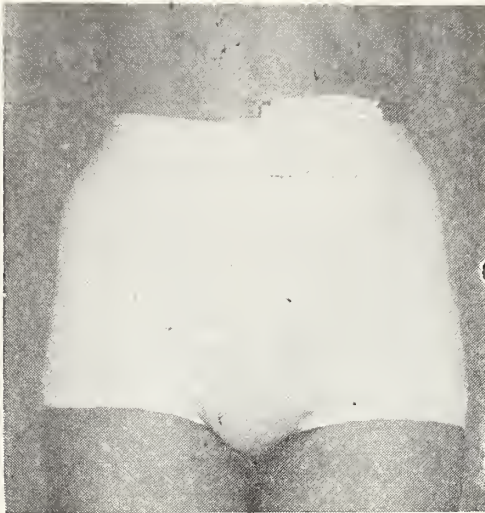
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of cancer in the colon and rectum with immediate end to end anastomosis. This should be done in every case where it is possible to do so. However, any growth within approximately three inches of the anal margin requires the removal of

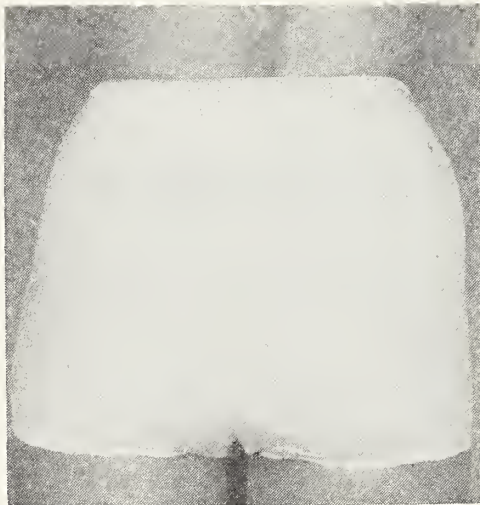
cedure applicable at that time should be done. By the best procedure I mean the operation which will give the patient the greatest chance of obtaining a cure. If the sphincter can be saved, that should be done.

When a permanent colostomy is made, a single end opening is preferable to a double barrel opening, since there is nearly always a spilling over of stool into the lower segment when it is adjacent to the upper stoma. The two ends of the bowel should be separated by placing the proximal end of the bowel in the upper end of the incision and the distal end in the lower end of the incision. If the colostomy is temporary, then the loop colostomy must be made. In constructing a permanent end colostomy, one should be sure that there is no free loop of bowel proximal to the opening, since it will prolapse later. The colostomy opening in the sigmoid or descending colon should be made so that a catheter can be passed from the external opening directly into the descending colon. The bowel mucosa at the opening should extend about one-half to one inch above the skin margin, and contracture of the stoma will be less frequent. The patient should be instructed to dilate digitally the colostomy opening if there is a tendency for it to contract. Many people in all walks of life are carrying on their duties with an artificial anus, with very little inconvenience and some say with no inconvenience.

The abdominal or the sacral anus is washed with soap and water. The use of soap and water should be started immediately after healing of the incision where the anus is placed. The most frequent complaints of the patient with a colostomy are the passage of mucus, bleeding from the surface of the colostomy, and irritation of the skin around the colostomy opening. If the patient has had a palliative colostomy for a growth which cannot be removed, the mucus and bloody discharge from the lower stoma may be profuse. The patient should be taught to irrigate this segment of the bowel, washing through and through from the abdominal opening to the anus. If this can be done, the patient can be kept comfortable. If the bowel below the stoma is occluded, mucus and blood continue to discharge from this abdominal opening as well as from the rectum. The patient of this type, who has a large fixed mass in the pelvis which cannot be removed and who has a colostomy, is an unbearable care to his family and to the public. He usually becomes progressively worse and eventually has to have some person in his family care for his disability. It is this person or family who has cared for such a patient who resolves never to have that operation. The patient who has had his growth removed, and



Front View



Back View

the anus and the surrounding tissues. Tumors in the upper portion of the ampulla, at the recto-sigmoid junction and in the sigmoid and above this area, can be resected and a primary closure made. The operative mortality rate in inexperienced hands will be higher than the operative mortality rate for the usual exteriorization procedure with closure later, or an abdominoperineal resection. Of course the physical condition of the patient must be taken into consideration at the time the operation is planned, and the best pro-



who learns to care for himself, does not present this hopeless picture. Personally, I believe we are not justified in doing colostomies on patients who will never be able to care for themselves.

When the mucosal surface of the stoma seems to weep or ooze blood, I suggest the daily application of 50 per cent alcohol. If the blood comes from the bowel lumen, further examination is indicated. The amount of skin irritation around a colostomy opening is greater as it approaches the cecum. Openings in the descending colon and sigmoid usually are not irritated by the bowel discharge. When there is irritation surrounding the opening, many patients are relieved by the application of commercial back rubs or hand lotions. The skin must be kept washed clean, but when irritated olive oil should be used for cleansing the surface instead of soap. When the skin is irritated by digestive juices, it will be necessary to cover the surface with an aluminum paste. The patient will learn in time that certain foods produce an irritating stool and they will or should avoid those foods.

The control of the colostomy is brought about by three procedures—singly or combined. They are the selection of a proper diet, the acquiring of regular habits, and the use of colon irrigations.

Immediately following surgery and while in the hospital, the patient should have a low residue, high protein diet. This diet is similar to the non-residue diet used in preoperative preparation of the patient.

#### DIET NUMBER 1

##### Cereals

Cream of wheat  
Farina  
Wheatena  
Pablum  
Boiled rice

##### Meats

Bacon  
Beef—scraped, boiled, roasted  
Liver—the fibrous portions should be removed  
Meat stews—beef, chicken, lamb  
Poultry, chicken, turkey  
Fish—fresh water fish—omit catfish  
Eggs—soft boiled, poached, soft fried

##### Breads

White bread—dry, stale, toasted  
Rusk  
Zwiebach

##### Vegetables

Potatoes—baked or mashed  
Creamed asparagus  
New carrots creamed  
Baked squash

##### Salads

Gelatin—plain  
Cottage cheese  
Philadelphia cream cheese

##### Desserts

Bananas—real ripe  
Gelatin—plain  
Cake—angel food or sponge  
Puddings—custards, ice cream, sherbets

#### MENU

##### Breakfast

A large portion of cream of wheat with cream and sugar or boiled milk and sugar  
White toast—1 or 2 slices and 1 pat of butter  
Two eggs—soft boiled, poached or soft fried  
Two slices of crisp bacon  
One cup of coffee or tea—cream and sugar if desired

#### Luncheon

A creamed soup  
Meat, fish or egg  
Baked or mashed potato  
Toast or cracker with butter  
Dessert  
Drink—tea, coffee or boiled milk

#### Dinner

Soup if desired  
Meat, egg or fish  
One vegetable  
Bread and butter  
A cottage cheese or gelatin salad  
Dessert  
Drink

During the first-ten day postoperative period, the patient should have a thorough cleansing of the entire gastro-intestinal tract by using a mild saline cathartic, since there is often a large accumulation in the bowel which was not emptied pre-operatively, usually because of partial obstruction. After this catharsis, you can then talk about dietary restrictions which will regulate the bowel. The patient must be made to realize that when a colostomy is present, a moderate constipation is to be desired and a bowel movement only every second or third day does not interfere with health. If the patient allows the stool to become too dry and hard, an impaction may form which must be removed digitally at times. The patient should be allowed to try to regulate the bowel by diet and regular habits alone.

After the first ten days, or upon returning to his home, he is started on diet number 2.

#### DIET NUMBER 2

When the patient is handling diet number 1, you may then try adding the following:

Oat meal  
Ralston's  
Pettijohn's  
Dry cereals  
Bran and bran cereals and cereals containing flaxseed must not be used

Meats  
Cured meats and game  
Macaroni and spaghetti, not too highly seasoned, may be substituted for meats

Salads—fresh real ripe tomatoes; gelatin with fruit or vegetables; wilted lettuce. Oil and boiled dressings may be used. Roquefort and Camembert cheese

Fruits and desserts—stewed dried fruits and canned fruits—peaches, pears, prunes. Real ripe cantaloupe or honey dew melon. Fruit tapioca, rice tapioca, prune whip. Cream filled pies

Vegetables—broccoli, creamed cabbage, cauliflower, creamed celery, chopped spinach, tiny string beans, summer squash, tomatoes, sweet potatoes, tiny peas, pumpkin, rutabaga, parsnips, yams, zucchini

This list must be adhered to closely until the patient determines the effect of these foods on his bowel. If the patient is too constipated, it may be enlarged upon, and if the bowel is too loose, further restrictions may be made.

In general the following foods should be given preference. Milk and cream and milk products, cooked cereals which do not contain bran, rice, custards, puddings, white bread and butter, meats which are lean in liberal quantities (they should not be fried), eggs in any form, cooked vegetables and fruits may be taken provided mushy or watery stools do not develop. The patient will be able to tell that certain foods interfere with control and

these should be eliminated. Most patients with colostomies have trouble with fresh fruits and juices and raw salads, fresh green vegetables, especially corn and navy beans in any form. Apples in any form produce gas and frequent stools. Iced drinks, real hot drinks, carbonated drinks, beer, and all alcoholic drinks produce a hyperperistalsis. Highly seasoned foods, relishes, condiments, and rich gravies should be avoided.

The intake of fluid through the day should not be excessive. Some patients will be able to take water and other drinks normally while many must restrict the fluid intake to six to eight or ten glasses a day. This is something that the patient must determine for himself. With control by diet only, the patient will report that he usually has a stool immediately on rising, or the first thing after breakfast, and again after the evening meal. If the bowel can be regulated so that it will act in this way, irrigations should not be used.

If the bowel does not empty completely each A.M. and P.M. and the patient has frequent, small or loose stools, he should resort to the use of irrigations. The patient should select a definite time of day that the irrigation is to be taken and that time should not vary. Usually a one or two quart irrigation of the colon every second day will keep the lower bowel clean. It may be necessary to use it each day, or the patient may find that every third day is often enough to keep the bowel clean. The irrigation is taken best with the patient lying on his right side. Normal salt solution at body temperature is used. A number 24 soft rubber catheter is used as the enema tip. It is inserted more easily by allowing the solution to flow ahead of the tip. The catheter may be passed through a hole in a soft rubber bath sponge and this sponge used to occlude the colostomy opening while the solution is flowing in.

To evacuate the irrigation, the patient should lie on the left side and empty into a hooded basin or a pail, since there may be some spilling. A rubber sheet should be placed on the bed. Another method of emptying is to sit on a low stool directly facing the toilet bowl and empty into the stool.

Information is usually sought regarding the use of cathartics. If it is necessary to use a cathartic, I suggest the use of phenolphthalein or aromatic cascara in small doses. For a thorough cleansing, a good dose of saline cathartic should be used. Mineral oil in any form is contraindicated since it produces a slippery liquid stool which cannot be controlled. Artificial bulks with or without cascara may be used. Occasionally an artificial bulk will serve to make a formed stool and aid in establishing control. I believe that control can be at-

tained by the use of diet, regular habits, and irrigations. The old constipation remedies and drugs such as blackberry cordial, bismuth subnitrate, paregoric, laudanum, and opium pills should not be used.

I realize that every physician believes his patients do best under his own personal regime and that each physician personally thinks his method is the best. It may be the best in his hands, but may not meet your approval. This routine which I have outlined is my way of caring for these people, and many patients who anticipated that they would be ostracized from society because of their disability are living comfortably and carrying on their normal duties.

## NITRATE LEVELS IN WATER FROM RURAL IOWA WELLS

### A Preliminary Report

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A new emphasis was placed upon the determination of nitrate concentrations in privately owned wells following Comly's initial observation of nitrates in well water as the cause of methemoglobinemia in infants.<sup>1</sup> Attention was focused upon dug wells because of previous observations of occasional high levels of nitrate nitrogen in samples from this type of well and because in Comly's first three cases the milk formula contained water from such a source. Data gathered over a six month period have demonstrated that, in the interest of protecting infant health in rural communities, a routine program which combines nitrate determinations with the usual bacteriologic tests may be justified. A review of the nitrate data recorded prior to the onset of the present war emergency, when the laboratory staff was adequate to carry an enlarged program, gives support to this point of view.†

Faulty construction in dug wells is the usual finding. In many instances these wells are curbed with loose rock or are bricked up without the proper use of mortar and cement. Tree roots commonly penetrate the well and may serve to direct the flow of shallow ground water toward an aperture in the wall of the well shaft. The

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\*\*With permission of the Director, Iowa Geological Survey.

†The authors are indebted to Lt. Col. J. J. Hinman, Jr., Principal Water Analyst on leave with the United States Army, for the data reported from the year 1939.



proximity of barns and feed lots to these wells is a further cause of concern. No information is available from analyses of soil samples collected in and around barnyards and feed lots relating to the accumulation of nitrates in such areas. The relation of topography and other factors to the findings reported below is a matter for investigation by the public health engineer. The purpose of this preliminary report is to present data in support of Comly's contention that a hazard to child health exists and that the frequency of toxic levels of nitrates in farm well water justifies early institution of a remedial program.

Beginning in December of 1944, nitrate determinations were run on the residual water left from the bacteriologic tests of all water samples submitted from dug wells. The phenol-disulfonic acid method of analysis was used, in which a sample of the water is evaporated, phenol-disulfonic acid is added to the residue, and the solution is made alkaline to develop a yellow color.<sup>2</sup> It was found that the addition of ammonium sulfate to the acid solution prevented the precipitation of magnesium and aluminum hydroxides when the solution was made alkaline with potassium hydroxide, thus eliminating the time-consuming operation of filtering the samples before determining the color. No deviation is caused by this modification. As the daily load of such analyses increased, it was decided to speed up the work where possible and to reduce the factor of personal error in matching colors. This was accomplished by the use of electrophotometric methods. It was found that the Fisher Electrophotometer served the purpose well. A set of graphs was prepared, based upon readings from carefully-prepared standard solutions. The attention given to their preparation was amply repaid in time and accuracy of results. Reproducible readings were readily obtained by scrupulous care in cleaning the absorption cells and in following the instructions for the operation of the instrument. Cylindrical, 23 milliliter cells were used in reading values above 0.3 parts per million. Where the depth of color was less, it was found expedient to use the rectangular, 65 milliliter cell. In many samples the depth of color developed in an undiluted sample was too great to be handled within the efficient working range of the electrophotometer. In these instances volumetric dilutions of the yellow solution were made.

Shortage of personnel in the laboratory made it impossible to investigate all types of samples on a mass basis. Whenever the information submitted with a water sample included reference to tree roots in the well, bitter taste, or citation of a child's illness, a nitrate analysis was run regard-

less of the source. Otherwise the analysis was restricted to samples from dug wells. Therefore, the information assembled to date is inadequate to serve as a basis of public health judgment regarding all types of wells. It is, however, complete enough to justify the immediate display of a warning signal to those charged with the responsibility of protecting the health of both resident and transient children in our rural areas. Pending an engineering survey, all farm wells might be considered potential causes of the syndrome described by Comly. Complete safety of an infant on a farm cannot be assured until information is available regarding maximum depth at which shallow ground water containing an excess of nitrates can affect the chemical quality of well water. Although the casing of a well may be sound, we do not know how deep a well must be to escape nitrate pollution from a shallow source. We also have no exact information regarding the nature of the foci from which these loads of nitrate seep into the wells. The whole problem requires thorough investigation. There is, furthermore, no reason to restrict attention to the state of Iowa. It would be of interest to know the geographic distribution of the condition reflected by the data in the tables and graph included in this report.

Comly has pointed out that the infant formula which involves evaporated milk or powdered milk as a base supplies the child with a greater volume of water than does the usual formula in which less water is used as a diluent. Consequently, the nitrate content of water so far incriminated by physicians dealing with Comly's syndrome cannot serve as a guide in settling the maximum allowable concentration. If a child is injured by evaporated milk diluted with water containing 60 milligrams of nitrate nitrogen per liter (60 parts per million), it follows that powdered milk diluted with water of a much lower nitrate content could produce the same effect. Furthermore, the injury caused by prolonged intake of 20 or 30 milligrams of nitrate nitrogen per liter upon the general health of a child is undetermined.

Examination of the tables and figure given here will reveal that 28.9 per cent of 243 dug wells tested during the first six months of 1945 contained nitrate nitrogen in excess of 20 milligrams per liter, 15.3 per cent contained nitrate nitrogen in excess of 50 milligrams per liter, and that on one occasion, a value of more than 500 was obtained. Supporting data taken from the files for the year 1939 are shown in Tables I, IV, and V. The frequency of nitrate levels in excess of 50 milligrams per liter might lead one to speculate regarding the extent of the damage to child health during past years.

TABLE I  
NITRATE NITROGEN IN 454 DUG WELLS, 1939

Parts per Million ..	0-10	11-20	21-30	31-40	41-50	51-60	61-70	71-80	81-90	91-100	101-120	121-140	141-160
No. of Samples. . . .	302	48	38	16	11	12	8	8	1	5	2	0	3
Per Cent of Total. . .	66.5	10.5	8.4	3.5	2.4	2.6	1.8	1.8	0.22	1.1	0.44	0.0	0.66

TABLE II  
NITRATE NITROGEN IN 243 DUG WELLS, FIRST SIX MONTHS OF 1945

Parts per Million ..	0-10	11-20	21-30	31-40	41-50	51-60	61-70	71-80	81-90	91-100	101-120
No. of Samples. . . .	118	27	13	12	5	5	7	8	1	7	7
Per Cent of Total. . .	48.6	11.1	5.34	4.93	2.05	2.05	2.88	3.28	0.41	2.88	2.88

Parts per Million ..	121-140	141-160	161-180	181-200	201-240	241-280	281-320	321-360	361-400	401-500	501-600
No. of Samples. . . .	5	6	4	5	1	5	3	2	0	1	1
Per Cent of Total. . .	2.05	2.46	1.65	2.05	0.41	2.05	1.24	0.82	0.0	0.41	0.41

TABLE III  
TABLES I AND II COMBINED

Parts per Million ..	0-10	11-20	21-30	31-40	41-50	51-60	61-70	71-80	81-90	91-100	101-120
No. of Samples. . . .	420	75	51	28	16	17	15	16	2	12	9
Per Cent of Total. . .	60.3	10.8	7.31	4.0	2.3	2.4	2.2	2.3	0.28	1.7	1.26

Parts per Million ..	121-140	141-160	161-180	181-200	201-240	241-280	281-320	321-360	361-400	401-500	501-600
No. of Samples. . . .	5	9	4	5	1	5	3	2	0	1	1
Per Cent of Total. . .	0.72	1.3	0.57	0.72	0.14	0.72	0.43	0.28	0.0	0.14	0.14

TABLE IV  
NITRATE NITROGEN IN 647 DRILLED WELLS, 1939

Parts per Million ..	0-10	11-20	21-30	31-40	41-50	51-60	61-70	71-80	81-90	91-100	101-120
No. of Samples. . . .	618	16	6	1	3	0	1	1	0	0	1
Per Cent of Total. . .	95.5	2.5	0.93	0.15	0.46	0.0	0.15	0.15	0.0	0.0	0.15

TABLE V  
NITRATE NITROGEN IN 278 BORED WELLS, 1939

Parts per Million ..	0-10	11-20	21-30	31-40	41-50	51-60	61-70	71-80	81-90	91-100	101-120	121-140	141-160
No. of Samples. . . .	221	22	9	6	5	0	4	7	0	1	1	0	2
Per Cent of Total. . .	79.4	7.9	3.2	2.1	1.8	0.0	1.4	2.5	0.0	0.36	0.36	0.0	0.72

It has been customary to include nitrite and nitrate determinations in routine sanitary chemical analyses in order to gain information regarding the relative recency of pollution in a series of related samples. In the course of the work reported here it has been found that a high concentration of nitrate nitrogen can occur in water in which no coliform organisms were demonstrable. This finding is by no means a novelty in the field of water analysis. It was further found that nitrite values bore no predictable relation to the

both the medical and the public health engineering approach is indicated.

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REDUCTION PROCEDURE FOR  
CERVICAL SPINE FRACTURES

A Preliminary Report

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In 1943 Morton<sup>1</sup> described a new technic for treatment of cervical spine fractures in which the reduction was accomplished by means of a special board. Any 5-inch board may be utilized, with one end of the board gradually tapered over the terminal 25 inches to a 3-inch width. The patient lies supine upon the operating table, with the thorax and neck supported solely by the board protruding beyond the edge of the table. The occiput just clears the 3-inch tip of the board and serves as the fulcrum point for the traction necessary for reduction (Figure 1). It is surprising to note the degree of traction possible through the use of this method. Once traction has accomplished reduction, it is a simple matter to apply a plaster of paris helmet and body cast without moving the patient. As soon as the plaster of paris has set, the board is easily slipped from beneath the patient. The patient becomes ambulatory while wearing the helmet (Figure 2).

Not only is it possible to obtain an unusual traction force from the fulcrum beneath the occiput, but the board stabilizes the cervical spine sufficiently to allow the operator much freer use of his hands. Reduction is relatively simple; a word of caution against overenthusiastic traction is suggested. In several patients soft tissue wounds of

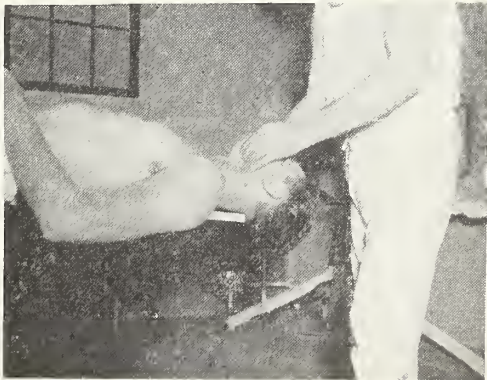


Figure 1

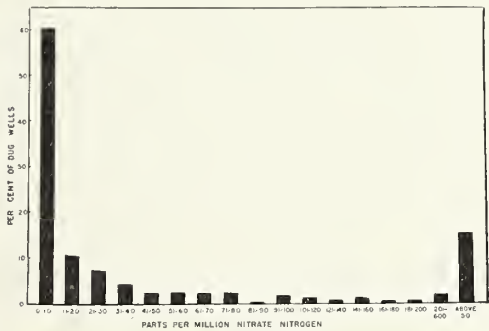


Fig. 1. Nitrate nitrogen in dug wells, 1939 and first six months of 1945 (From Table III).

values obtained from the nitrate determinations. This fact leads the authors to suspect that the nitrates found in such water samples had primary origin other than in bacterial action, possibly absorption from tree roots.

It now appears that routine analysis of water samples from privately owned wells may assume independent importance. The data from nitrite determinations on the samples studied during the current period are not recorded. They have been uniformly below the level so far suspected of producing pathology in infants. During the present general shortage of laboratory personnel, public health laboratories may be justified in emphasizing the nitrate content and omitting the nitrite test in the chemical analysis of samples of water from private wells.

SUMMARY

1. Data from the nitrate determinations of a series of privately owned wells in Iowa have been recorded.
2. The number of wells found to contain nitrate nitrogen in an amount demonstrated to produce cyanosis in infants is significant.
3. The implication is clear that a hazard to infant health in our rural areas exists.
4. The precise cause of high nitrate concentrations in the wells sampled in this study is unknown and a full investigation of the whole problem from



the cervical area complicated the reduction, but did not hinder the operator in exerting sufficient traction manually beneath the mandible. Thus, controlled traction is possible in any degree essential to reduce the fracture. Spot x-ray check films may be made at any time during the procedure to verify the reduction. By incorporating wire ladder splints in the helmet and body jacket, the resulting support is sufficiently stable to allow windows, if desired, over wounds of the cervical area.

After using this method in ten cases, most of them in a Naval Hospital in the Central Pacific

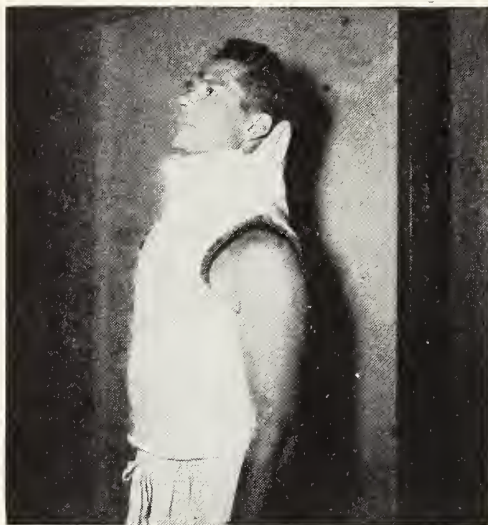


Figure 2

area, the authors are most enthusiastic in support of this treatment. It is believed that the use of halters, Crutchfield tongs, traction bands controlled by the weight of the operator's own body, and other types of traction devices will rarely be indicated in the future. Even a severe compression fracture of the proximal dorsal spine has been treated by this method.

#### CASE REPORT I

The patient C. S., PhM 3/c, USNR, twenty-one years of age, was injured while driving a jeep which slid on pebbles while rounding a corner and overturned when it ran off the road. He was unconscious for a few minutes, following which he complained of pain in the back between his shoulder blades, and pain on breathing. Examination on admission revealed partial shock. The patient was bleeding from several scalp wounds and abrasions. Skin hyperesthesia was present over the midsternum at ribs five to seven. X-ray examination revealed a depressed fracture 2 centimeters in diameter in the superior portion of the left frontal bone just to the left of the midline.

There were compressed fractures of the bodies of the fifth and sixth dorsal vertebrae, with a dislocation to the left of D5 on D6 causing a scoliosis with convexity to the left. Under pentothal sodium anesthesia, a compound depressed fracture 2 x 1 centimeters was found at the left frontal area, with indriven bone fragments which were removed. There was a small laceration of the dura, and one cortical vessel which was bleeding. Hemostasis was effected with silver clips. Traction was then applied to the neck, using the tip of the board as a fulcrum point. As traction was applied, a positive Babinski's sign on the left was noted to diminish and then to disappear. A plaster helmet and body jacket was applied. Post-reduction films revealed that the compression fracture of the body of D5 had improved, and the lateral displacement of this vertebra was somewhat less than before reduction. However, there was still considerable narrowing of the bodies and displacement of D5 to the left. The patient was definitely improved, although he still had some root pain involving the 4, 5 and 6 dorsal dermatomes, which was subsiding. He was evacuated to a naval hospital within the continental limits.

#### CASE REPORT II

The patient, F.I.R., Pfc., USMCR, nineteen years of age, was wounded by shrapnel during enemy action and sustained multiple injuries. He was unconscious for an indefinite period. When he first attempted to swallow, he noted that liquids ran out the wound of the right neck; if he held his head to the left, he could swallow satisfactorily. Examination revealed a jagged open wound of the right neck extending from 2 centimeters anterior to the midline to the mandible, with an opening into the mouth. There was a wound of the hard palate with marked swelling of the right face. There was a small wound of the left nostril and multiple small wounds of the right arm and forearm, left buttock, and knee. X-ray examination of the skull revealed a severe comminuted fracture involving the ramus and angle and ascending portion of the right mandible. There was considerable loss of bone substance with numerous bone fragments and metallic foreign bodies seen in the soft tissues of the face and neck. There was an associated fracture of the anterior wall of the right maxilla which involved the alveolar ridge. The fracture line extended anteriorly across the midline. There was some clouding of the right maxillary antrum probably due to hemorrhage. There was slight anterior dislocation of the fourth cervical vertebra. Using the board, the dislocation of the fourth cervical vertebra was reduced and a plaster of paris helmet and body jacket was applied, leaving a window over the wound of the



right neck. Four days later the fracture of the mandible was reduced and set, with intermaxillary wiring with rubber traction. The oral surgeon was able to utilize the helmet portion of the cast in conjunction with his stabilization. Three days later the patient was evacuated to a naval hospital within the continental limits.

## COMMENT

Six other patients with fractures of cervical vertebrae were treated similarly in one U. S. Naval Hospital in the Central Pacific area. One patient was suffering from a fracture of the second cervical vertebra, two with a fracture of the third and fourth cervical, three with fractures of the sixth cervical, one with fractures of the sixth and seventh cervical, and one with fracture of the fifth on sixth cervical vertebra. In all of these cases, the board was utilized for the reduction, followed by application of a plaster helmet and body jacket. Extravagant use of felt padding was made to prevent the development of pressure areas of the skin over bony protuberances. It is recommended that the jacket be worn for six weeks. Then a cervical brace is worn until subsidence of all symptoms. All patients progressed well. There were no deaths in this series. Since all films are transferred with the patient upon his evacuation to a rear area, we are unable to reproduce any roentgenograms for presentation.

NOTE—The opinions or assertions contained herein are the private ones of the writers and are not to be construed as official or reflecting the views of the Navy Department or the Naval service at large.

## REFERENCE

1. Morton, H. S.: Method of reducing fracture dislocations of cervical vertebrae; with report of two illustrated cases. *J. Bone & Joint Surg.*, xxv:859-866 (October) 1943.

## CLINICOPATHOLOGIC CONFERENCE

## TRANSITIONAL CELL CARCINOMA OF THE NASOPHARYNX

Report of a Case With Involvement of All Twelve Cranial Nerves

MAJOR JOSEPH E. FLYNN, M.C., A.U.S.

## CASE REPORT

The patient, a white male fifty-one years of age, entered the hospital October 24, 1944. The history revealed that in 1940 he sought medical advice because of headache, facial pain, nasal obstruction, epistaxis, weight loss, and tinnitus. His physician told him he had sinusitis. In 1941 he

went to a private clinic because of an increase in the severity of the aforementioned symptoms. There the diagnosis was made of a grade 4 squamous cell epithelioma of the nasopharynx with metastases to the cervical and retroperitoneal lymph nodes. In addition, he was thought to have diabetes mellitus. At the private clinic x-ray treatment was given. This was repeated in 1941 and 1942 (See Fig. 1). In 1943 he entered another hospital because of diplopia. Examination on this admission revealed a sixth nerve palsy, enlargement of the cervical lymph nodes, and a recurrence of the primary lesion in the fossa of Rosenmüller. There was no evidence of diabetes mellitus. X-ray therapy was given with considerable improvement. Later in 1943 he again developed enlargement of the cervical lymph nodes. A biopsy of this lymph node was reported as a metastatic transitional cell carcinoma. At this time a chest film revealed pulmonary metastases. X-ray therapy was given to the chest, neck and head. A roentgenogram of the chest on August 25, 1943, showed the metastatic neoplastic infiltrates to have disappeared. From 1943 to 1944 it was necessary to give radiation therapy because of headache and ocular palsies. Beginning in May, 1944, there were episodes of unconsciousness, usually preceded by an olfactory aura. The vision of the right eye was gone. Increasing deafness of the right ear had been observed. Still later, despite a good appetite, the patient had difficulty in eating due to dysphagia, so that he was forced to sit, like Banquo's ghost, forbidden at the feast.

*Physical Examination:* The temperature on admission was 98.4 degrees, the pulse 80, respirations 16, blood pressure 120/80. The patient was poorly nourished and appeared acutely ill. There was no vision in the right eye; on the left the patient counted fingers with difficulty. There was marked ptosis of the right eyelid. There was paresis of the right extra-ocular muscles. There was paresis of the left external rectus. The right pupil was dilated. The right cornea was steamy. In the fundus there was hemorrhage in the region of the nerve head which extended out into the vitreous body. The retinal vessels could not be seen directly. The left pupil was small. The fundus showed scattered areas of old retinitis as well as areas of hemorrhage. The disk was not abnormal. The macula was not seen. The vessels showed moderate sclerosis with arteriovenous compression. The mucous membrane of the lips, tongue, and oral cavity was dry, smooth, and red. There was marked weakness of the soft palate. The gag reflex was absent. The tongue projected to the right. There was some cervical adenopathy on the right. The lungs were clear on percussion

From the Army and Navy General Hospital, Hot Springs National Park, Arkansas.

Present address of author: Department of Pathology, College of Physicians and Surgeons, Columbia University, New York 32, New York.

TOTAL ROENTGENS (MEASURED IN AIR) GIVEN EACH PORT IN EACH SERIES

Series	Ports														
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
I	625	625	550	550								550	550	550	550
II	550	550	550	1100											
III	625	625	1100	1100											
IV	800	800	1000	1000	1000	1000	400								
V								600	400	1550	1400				
VI	800	450	300												
VII	450	700													
VIII	900	900													
Totals	4750	4650	3500	3750	1000	1000	400	600	400	1550	1400	550	550	550	550

Series I given July 7 to July 17, 1941

Series II given March 6 to March 11, 1942

Series III given August 7 to August 14, 1942

Series IV given February 27 to March 18, 1943

Series V given June 8 to July 3, 1943

Series VI given August 28 to September 10, 1943

Series VII given November 20 to November 29, 1943

Series VIII given April 20 to May 3, 1944

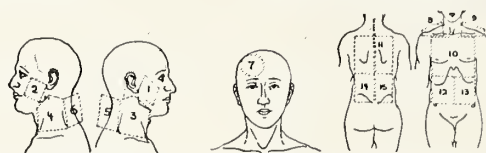


Fig. 1. Total roentgens (measured in air) given each port in each series. Radiation therapy was begun in July, 1941, and continued until May 3, 1944. Inasmuch as the therapy was given in two different institutions, absolutely identical portals were not used during the various series. The table is as close an approximation as possible.

and auscultation. The heart was normal. There was evidence of marked muscular wasting. Cyanosis of the nail beds was marked. There were small crusted lesions of the right upper lip. There was a positive Babinski's sign on the left.

The neurologist's opinion was as follows: "The patient was blind in the right eye. There were no extra-ocular movements on the right. No external rotation of the left eye appeared, but its other movements were fully performed. It had been reported that the patient had noted abnormal olfaction in the right nostril. A complete right facial weakness was present involving all branches of the facial nerve, and sensation was markedly obtunded throughout the right side of the face and forehead. Hearing was grossly decreased in the right ear. Head movements were normally accomplished with normal exhibition and strength of the sternocleidomastoid muscles, but the right shoulder was not as strongly elevated as the left. The uvula was pulled to the left. The tongue was considerably atrophied, more on the right, and protruded slightly to the right. Speech was

nasal, indistinct, and poorly enunciated in a hollow manner.

"It was reported during the last few days the patient had experienced several unconscious attacks, without convulsive movements, of about ten minutes' duration. He was mentally clear at the time of examination, appropriately cooperative, and logically responsive, though with limited elaboration.

"Diagnosis: Carcinoma, nasopharynx, with extension and metastases, severe, to the floor of the cranium, mainly on the right, and particularly in the right midfossa, manifested by peripheral involvement of cranial nerves 1 to 12, right, and abducens, left, with extensive osseous involvement, particularly of the petrous portion of the right sphenoid."

*Laboratory and X-Ray Observations:* The red blood cell count was 3,200,000. The hemoglobin was 9.5 grams. The white blood cell count was 11,000 with 95 per cent neutrophils. Urinalyses were normal. The specific gravity was 1.011. No albumin or sugar was present. The microscopic examination of the urine was negative. A roentgenogram of the chest revealed bronchopneumonic infiltration throughout the right lung and slight bronchopneumonic infiltration of the central portion of the left lung. The bony structures were normal.

*Course:* Shortly after admission the patient had a convulsion which lasted about fifteen minutes. Following the convulsion he was mentally alert. From the time of admission he had considerable difficulty in removing the secretions from his pharynx. The temperature rose to 101 degrees, respirations to 36. The patient was given intravenous fluids and the administration of sulfadiazine was begun. At 3:40 a. m., October 25, 1944,

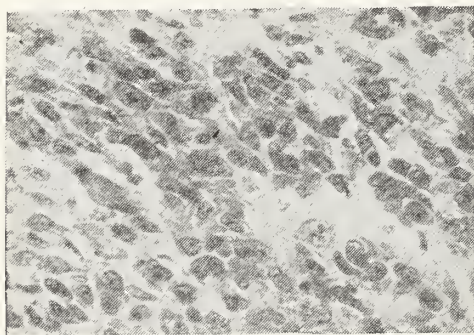


Fig. 2. Photomicrograph of a metastatic lesion in the right lung. The neoplastic cells are epitheloid in character, possessing a large vesicular nucleus with a prominent nucleolus. The cells are arranged in irregular cords and sheets. A.M.M. Neg. 87900 (x 1000).



he became irrational, delirious, and comatose. He expired at 5:42 p. m., October 25, 1944.

*Diagnosis:* Carcinoma, transitional cell type, nasopharynx, with metastasis to floor of the skull.

#### NECROPSY REPORT

Necropsy revealed a transitional cell carcinoma of the nasopharynx with metastases to the para-



Fig. 3. Photomicrograph of a metastases to the vertebral bone marrow. Surrounding the osseous spicule are small clusters of neoplastic cells. A.M.M. Neg. 87899 (x 230).

aortic lymph nodes, hilar lymph nodes, mediastinal lymph nodes, and lymph nodes of the hepaticoduodenal ligament. Metastases were also found in the lungs, liver, pancreas, retroperitoneal tissues, pars nervosa of the hypophysis, and in the vertebral bone marrow. The neoplasm had extended through the foramina in the base of the skull and had infiltrated under the dura covering the right anterior, middle, and posterior cerebral fossae. The tumor tissue had crossed the midline and had involved the left abducens nerve. At one place the neoplastic tissue had penetrated through the dura and had extended into the tip of the right temporal lobe. The right cavernous sinus was extensively infiltrated.

#### Anatomic Diagnoses:

1. Carcinoma, transitional cell, nasopharyngeal; with extension and metastases to the floor of skull, brain, para-aortic lymph nodes, hilar lymph nodes, mediastinal lymph nodes, lymph nodes of hepatic duodenal ligament, lungs, liver, pancreas, retroperitoneal tissues, pars nervosa of the hypophysis, right cavernous sinus, and bone marrow.

2. Pneumonia, confluent, lobular, bilateral, terminal.

3. Pleuritis, subacute, bilateral.

4. Hydrops, gallbladder.

5. Hypertrophy, prostatic, slight.

6. Arteriosclerosis and arteriosclerosis, heart, lungs, spleen, periadrenal connective tissue.

7. Sclerosis, Mönckeberg's brain.

8. Goiter, adenomatous.

9. Metaplasia, keratinizing, esophagus, slight.

#### COMMENT

A transitional cell carcinoma arises from a mucous membrane containing stratified, nonkeratinized epithelium as, for example, that of the urinary bladder, pharynx, or cervical canal. In the pharynx the transitional cell carcinoma apparently has a predilection for areas where lymphoid tissue is covered by epithelium, such as the posterior nares, about the eustachian orifice, and the pharyngeal vault. An attempt is made sometimes to separate a transitional cell carcinoma and lymphoepithelioma. Many pathologists, like the writer, use the terms synonymously, since the presence of lymphoid cells, intermixed as they are with the neoplastic epithelial cells, is considered more on the order of an adventitious diluent. The lymphoid cells are often conspicuously absent in metastases to nonlymphoid tissues. The important thing to remember is that the attributes of any malignancy depend not only on the intrinsic biologic characteristics, but likewise on the dictates of its environment. The intrinsic biologic characteristics of a transitional cell carcinoma are (1) the tendency of the primary to metastasize early to the regional lymph nodes and then to the blood stream, and (2) a high degree of radiosensitivity of the primary and its implants, unassociated with a proportionate degree of radiocurability. The environment of the malignancy in the case reported readily explains the initial presenting symptoms. The nasal stuffiness was related to obstruction of the posterior nares; the epistaxis was due to the friability of the tumor mass; and the tinnitus resulted from obstruction of the eustachian orifice. The spread of the malignancy was likewise typical, going early to the cervical lymph nodes and, locally, extending laterally to reach the intracranial region through the basal osseous apertures of the skull. Since the retro-peritoneal metastases were observed in 1942, it seems likely that the generalization of the malignancy was to the blood stream via the thoracic duct.

The metastatic involvement of the pars nervosa was of interest. A neoplastic metastasis to the pars nervosa rarely results in diabetes insipidus unless the neoplasm likewise involves the hypothalamus and destroys the supra-optic nuclei and/or supra-opticohypophyseal tracts. This is due to the fact that the neoplastic tissue in the posterior lobe seldom destroys all of the tissue. Apparently the posterior lobe, like other organs, possesses an appreciable margin of safety. The infiltration of the cavernous sinus explains the right intra-ocular findings noted in the clinical abstract.

### COURSE IN THE OPERATION OF BLOOD TRANSFUSION SERVICES

The State University of Iowa, College of Medicine, will present a complete course in the theory and practice of blood transfusion and related subjects which will assist in qualifying physicians to supervise and operate blood transfusion services. The course will be conducted by Drs. Elmer L. DeGowin, Robert C. Hardin and staff, and will be held in the University Hospitals in Iowa City from February 4 to March 2, 1946.

The subjects which will be considered in theory and illustrated, whenever possible, in the laboratory and on the wards are: a historical perspective on blood transfusion; the physico-chemical characteristics of human blood; the theoretic and clinical aspects of the A-B-O system of blood groups, the M-N system of blood types, and the Rh-Hr system of blood types; the theory and clinical applications of isosensitization (isoimmunity); cold hemagglutinins and related subjects as encountered in the laboratory and in relation to clinical medicine; lectures and laboratory instruction in blood grouping, typing, and crossmatching; the clinical use of blood and blood derivatives; the collection of blood and the physiology of blood donation; the administration of blood transfusions and the care of the recipient; the theoretic considerations and clinical experience with transfusion reactions; the storage and transportation of whole blood; the technic in the preparation of plasma; the preparation and use of blood derivatives and plasma substitutes; the practical operation of a blood bank; types of equipment for the laboratory and for blood transfusion; the preparation of fluids and equipment used in parenteral therapy.

The Blood Transfusion Service of the University Hospitals has operated a blood bank continuously since February 1939. During this period approximately 20,000 blood transfusions have been given. At present the average number of transfusions is about 85 weekly.

From five to ten qualified physicians will be accepted for matriculation in this course. A charge of \$50 will be made by the University; of this amount \$10 must accompany the application. This will be refunded in event that the applicant cannot be accommodated.

Correspondence regarding the course should be addressed to Dr. J. T. McClintock, in charge of Post-Graduate Studies, Medical Laboratories Building, State University of Iowa, Iowa City, Iowa.

### AMERICAN COLLEGE OF PHYSICIANS TO MEET IN MAY

The American College of Physicians will resume its Annual Meetings in 1946 and has now definitely chosen Philadelphia, May 13-17, inclusive. Headquarters will be at the Philadelphia Municipal Auditorium, 34th Street below Spruce. The meeting will be conducted under the Presidency of Dr. Ernest E. Irons, Chicago, Illinois, and the General Chairmanship of Dr. George Morris Piersol, Philadelphia, Pennsylvania.

### MINUTES OF MEETINGS OF STATE SOCIETY OFFICERS AND COMMITTEES

#### Meeting of the Board of Trustees November 18, 1945

The Board of Trustees of the Iowa State Medical Society met in the central office Sunday morning, November 18, 1945, with the following doctors present: John I. Marker, chairman; Walter A. Sternberg and Lee R. Woodward, trustees; Ransom D. Bernard, president; Robert L. Parker, president-elect; James A. Downing, treasurer; John W. Billingsley, chairman of the Legislative Committee, and Lee F. Hill, editor.

Bills were authorized and necessary expenses of the delegates to the meeting of the House of Delegates of the American Medical Association were voted. The board also named several other officers to attend various meetings in Chicago at the same time.

Dr. Hill's resignation as editor of the JOURNAL was accepted with regret; appointment of Dr. Everett M. George as editor was made; and JOURNAL policies were discussed.

Other items of business authorized by the board were as follows: annual audit of the books of the Society; sale of bonds to provide running expenses for the balance of the year; storage of historical records; and arrangements with the hotel for holding the annual meeting.

Meeting adjourned about 1:15 p. m.

#### December 16, 1945

The Board of Trustees met in the central office Sunday morning, December 16, with Doctors Marker, Woodward, Bernard, Parsons, and Downing present. Minutes were read, corrected and approved; bills authorized; the treasurer instructed to sell \$5,000 of bonds; an editorial board approved; and the budget for 1946 discussed and set up tentatively.

#### MORBIDITY REPORT

Disease	Nov. '45	Oct. '45	Nov. '44	Most Cases Reported From
Diphtheria .....	74	16	39	Cerro Gordo, Humboldt, Scott
Scarlet Fever .....	229	162	224	Polk, Woodbury, Dubuque
Typhoid Fever ....	4	1	4	Carroll, Cerro Gordo, Des Moines
Smallpox .....	0	0	1	.....
Measles .....	18	10	40	Des Moines, Webster, Calhoun
Whooping Cough ..	39	11	17	Linn, Johnson, Woodbury
Brucellosis .....	*249	17	35	Wapello, Polk, Webster
Chickenpox .....	204	79	240	Johnson, Story, Des Moines
German Measles ..	2	0	2	Boone
Influenza .....	8	3	1	Boone
Malaria .....	19	33	75	Clinton, Polk, Adams
Meningococcus ..	8	3	3	Clayton, Cerro Gordo, Clinton
Mumps .....	170	53	121	Washington, Woodbury, Des Moines
Pneumonia .....	14	10	32	Black Hawk, Cedar, Story
Poliomyelitis .....	42	101	14	Floyd, Kossuth, Black Hawk, Polk
Tuberculosis .....	50	48	39	For the state
Gonorrhea .....	243	264	244	For the state
Syphilis .....	126	105	161	For the state

\*246 of the 249 brucellosis reports are delayed reports from attending physicians in response to follow-up of agglutination reports as notified from the Department's State Hygienic Laboratory.



STATE DEPARTMENT OF HEALTH

Walter L. Biering

Reported Prevalence of Communicable Disease--1945

Diseases reported as being less prevalent in 1945 than in 1944 and below the expected number (based on the monthly average for the nine-year period 1935-1943) include measles, scarlet fever, typhoid fever, smallpox, and whooping cough.

Among diseases which were unduly prevalent during 1945 were brucellosis, diphtheria, pneumonia, poliomyelitis, and meningococcus meningitis.

The accompanying table lists the total of reported cases of ten communicable diseases during 1945 (through Saturday, December 15), also the total for 1944 and the expected total based on the experience of the past nine years, 1935-1943.

Disease	Number of Cases		
	1945 (through Dec. 15)	1944	Nine-Year Average 1935-1943
Brucellosis	482	295	192
Diphtheria	215	203	220
Measles	1268	5552	4961
Meningitis	80	108	33
Pneumonia	1518	616	828
Poliomyelitis	315	204	89
Scarlet Fever	2160	4530	3230
Smallpox	9	24	428
Typhoid Fever	37	50	96
Whooping Cough	262	504	1269

OCCURRENCE OF BRUCELLOSIS OF MAN AT HIGH LEVEL

The four-year period 1942-1945 witnessed an all time high level in the reported occurrence of brucellosis of man in Iowa. In 1942, official reports numbered 333, with 418 cases in 1943 and 295 cases in 1944. Reports totaled 482 in 1945 (through Novem-

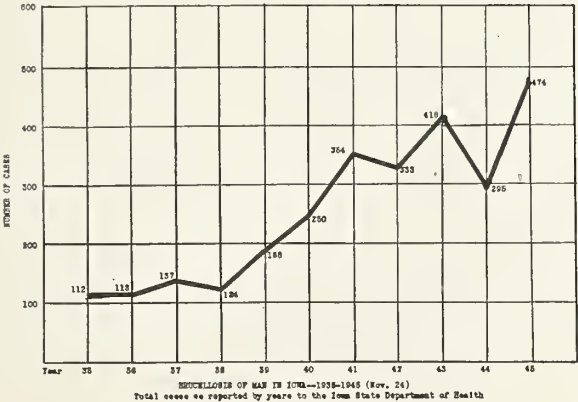


Fig. 1

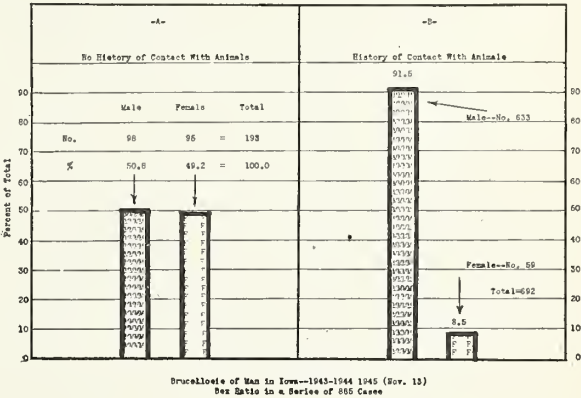


Fig. 2

ber 24), a number higher than in any previous year of record. The accompanying line diagram (Fig. 1) shows total cases as reported from year to year for the eleven-year period 1935-1945 (through November 24).

The marked increase in human infections is attributable in large part to stepped-up production of livestock during World War II. Many patients undoubtedly suffered illness due to their part in the war effort.

The estimated number of cattle on Iowa farms in 1944 was 5,525,000. During the same year the swine population approximated 20,000,000 and sheep about 3,000,000. These figures, supplied through courtesy of C. C. Franks, D.V.M., State Veterinarian, Iowa Department of Agriculture, are regarded as being 20 per cent higher than in prewar years.

During the twelve-year period 1930-1941, reported cases of brucellosis of man or undulant (Malta) fever in the United States totaled 20,594, an average annual morbidity rate of 1.87 per 100,000 population. In Iowa the total was 1,887 cases for the same period, an average annual morbidity rate of 6.25 per 100,000. The annual morbidity rate for brucellosis in Iowa for the five-year (prewar) period 1935-1939 was 5.31 per 100,000, compared with 13.00 per 100,000 for the five years 1940-1944, the corresponding period of World War II.

### OFFICIAL ANNOUNCEMENT

The Board of Trustees of the Iowa State Medical Society, at a meeting held November 18, 1945, accepted with regret the resignation of Dr. Lee Forrest Hill as editor of the JOURNAL. Dr. Everett M. George, recently returned from service with the United States Navy, was appointed editor effective January 1, 1946.

Dr. Hill began his duties as editor on January 1, 1937, and for nine years he has carried on the work of maintaining the JOURNAL as an educational and scientific instrument, and has tried to widen its usefulness by including much material on the economic or business side of medicine. He has been exceptionally well fitted for his task. Dr. Hill is known not only all over Iowa as an outstanding clinician, but ranks high among the pediatricians of the United States for his attainments in scientific medicine. In addition to this, he has devoted much time and thought to the economics of medicine.

The medical profession in Iowa has been most fortunate in having a man of his ability and his temperament as editor. A journal should be representative of the medical society for which it is a mouthpiece, and we believe that Dr. Hill has reflected faithfully in the pages of the JOURNAL the views and attainments of the members of the Iowa State Medical Society. In addition, the editorial pages of a journal may well serve as an inspirational force toward furthering the ideals of medicine. Here again Dr. Hill has possessed the ability to set forth the true aims of medicine and to call for renewed devotion.

Those who have worked with him know that it has been his constant desire to keep the members of the Iowa State Medical Society informed of all activities of the Society through the JOURNAL. Under his leadership minutes of committee meetings have been published, together with summaries of national or regional meetings of interest to Iowa doctors. National and state legislation has been analyzed and reported through the editorial columns.

The war brought many new problems to the publication of a journal. Dr. Hill met all of them cheerfully and efficiently. Shortening of the annual meeting and the loss of many physicians to the armed forces meant a decrease in scientific papers. Rationing of paper stock necessitated a curtailment of pages in the JOURNAL. However, by using smaller type for certain non-scientific material he was able to include important information for the members. He was also successful in procuring scientific papers from sources other than the annual meeting, so that the JOURNAL did not suffer too greatly.

When it came to the physicians in service, Dr. Hill held steadfastly to the principle that nothing was too much trouble where they were concerned—that they should have all of the benefits of membership. Every effort was made to keep the list of addresses up to date and the JOURNAL going to them regardless of where they might be stationed. He was also insistent that the roster of physicians in service be carried monthly and that it, too, be kept up to date. Although this naturally was of great interest to the physicians at home, he felt it was even more valuable to the physicians throughout the world, and in spite of the time and work involved in keeping it corrected, he maintained it each month.

Throughout the nine years of his service, he has worked at all times for the advancement of medicine in Iowa. His has been the wisdom to see that not only was scientific improvement necessary, but also an advancement in the distribution of medical care. He has kept pace with the changing social philosophies, recognizing those which were good and discarding those which would in the long run prove detrimental to the welfare of the patient. He has been a faithful servant, and in accepting his resignation, the trustees do so with regret and wish to express to him the gratitude of the doctors of Iowa for his editorial leadership.

Trustees—

John I. Marker, M.D.

Walter A. Sternberg, M.D.

Lee R. Woodward, M.D.



The JOURNAL of the  
Iowa State Medical Society

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Vol. XXXVI JANUARY, 1946 No. 1

DR. EVERETT M. GEORGE NEW EDITOR

With this issue of the JOURNAL your editor for the past nine years regretfully relinquishes his post because of the pressure of other duties.

As his successor, the Board of Trustees has appointed Dr. Everett M. George of Des Moines. Dr. George was graduated in 1925 from Drake University and received his medical degree from McGill University in Montreal in 1931. He returned to Des Moines for a year's internship at Iowa Lutheran Hospital, following which he served a surgical internship of fifteen months at Fifth Avenue Hospital in New York City. For the next six months he was a ship's surgeon. He received his training in the specialty of orthopedics at the New York Orthopedic Dispensary and Hospital where he served as intern from May 1, 1934, to May 1, 1935, as resident from 1935 to 1936, and as Annie C. Kane Fellow for a three year period from 1936 to 1939.

As an additional academic accomplishment, Dr. George in 1939 received the degree of Doctor of Science in Medicine from Columbia University College of Physicians and Surgeons. He began private practice as an orthopedic surgeon in Des Moines in 1939. In February 1941 he entered military service in the United States Navy with the rank of Lieutenant. He served in various Naval stations in this country until the spring of 1944 when he was detailed to overseas duty. His last assignment was with the U. S. Fleet Hospital No. 111 on Guam, a post he held from October 1944 to the last of September 1945. At the time of his separation from active duty with the Navy, Dr. George held the rank of Commander. He is on terminal leave at the present time and has again assumed practice in the field of orthopedics.

We believe the JOURNAL and its readers are for-

tunate indeed to have an editor of such broad cultural and scholastic background as Dr. George possesses. Under his capable guidance we envision increasingly higher standards for the JOURNAL. Our best wishes go with him as he takes up his new duties.

As your retiring editor, we should like to take this opportunity of expressing our thanks to all those with whom we have worked in such harmony during the past nine years. Especially would we like to pay our respects and give credit to those persons in the Central Office who perform their tasks for the Society so magnificently and yet so often unheralded—Mrs. Dorothy Dolk, Assistant to the Editor, Miss Mary McCord, Executive Secretary, and Miss Alma Jensen, Secretary of the Speakers Bureau.

A TRANSITION

In accepting the editorship of the JOURNAL, your new editor is deeply conscious of the obligation and responsibility entailed in following that versatile and cultured leader of medical thought, Dr. Lee Forrest Hill. His nine years of service as editor have been marked by a series of evolutionary events which have profoundly affected the entire field of medical practice. His carefully prepared editorials at all times have shown a keen insight and awareness of the danger of federalized control involved in the legislation enacted and pending in the National Congress. Furthermore, he has kept the physicians of Iowa constantly informed of the progress of scientific medicine in the state and throughout the world. He gave liberally of his talents and knowledge of progressive journalism in maintaining the high standards established by his predecessors, Drs. David S. Fairchild and Ralph R. Simmons, and thus gaining further recognition for our publication as one of the leading state medical journals in the United States. Although added duties have made it necessary for Dr. Hill to withdraw from the editorship, it is a source of personal gratification that his continued advice and counsel will be available to the new editor in the rather abrupt transition from four and a half years of service in the Medical Corps of the U. S. Navy to the somewhat unknown shores of medical journalism.

ANOTHER YEAR AHEAD

Once again it is a pleasure to follow our usual custom in greeting our readers and extending to them the best wishes of the holiday season. We are unusually happy to greet those members who have been fortunate enough to return from service with the armed forces throughout the world. To

those who are still needed in remote stations we extend the sincere hope that it will soon be possible for them to resume their places at home. We realize that the physicians who have borne the difficult burden of practicing during the absence of service members are only too happy to welcome the return of the service men. Not only is the approbation of "well done" to be applied to the men who served the sick and injured in all corners of the globe, but as well to the men who stayed at home and managed somehow to carry on efficiently during the war years.

As in years past, the problem of a subsidized plan of medical practice under governmental direction still confronts us. The Wagner-Murray-Dingell bill, the Pepper bill, President Truman's national health program, and other measures are being actively considered in Washington. The House of Delegates of the American Medical Association met during December to discuss the effects of these measures upon the private practice of medicine. During the past year an attempt has been made by the physicians of Iowa to accomplish a program which in some measure would answer the demand of certain groups for socialized medicine. This program, known as Iowa Medical Service, is believed to be one of the best plans yet offered for both the public and the practicing physician. A good beginning has been made in putting this program into effect. Undoubtedly many changes will have to be made from time to time before this service will prove satisfactory, but at least here is a definite effort to offer a concrete answer to the increasing demand for socialized medicine.

Whatever may lie ahead during 1946, we are sure the physicians of Iowa will enter into the work of the year with renewed enthusiasm based upon tasks well done in the past and with confidence in their ability to meet difficult situations as they arise. With the help of the returning service physicians the load should be lighter, and practice should be much more pleasant. Through fraternity of spirit and unity of purpose, let us unite to make this year a memorable one so that we may look back in another twelve months with pride toward the objectives attained.

#### THE USE OF INSULIN MIXTURES

There are now somewhat over 700,000 diabetic persons in the United States. A valuable new therapeutic agent in the treatment of many of these patients is insulin mixtures. Colwell calls them insulin mixtures, Peck calls them tailor-made insulins, and McBride insulin modifications. These various names are used by the different doctors because they use separate amounts in the mixtures.

The mixtures themselves are either regular insulin hydrochloride or clear crystalline insulin mixed with protamine zinc insulin. Mixing of the two gives an entirely different acting effect upon lowering the blood sugar than when either is used alone. They have the advantage over either clear quick acting or the slow longer acting protamine zinc insulin in that they do the work of both with the lessened inconvenience of more than one jab with the needle per day. Second, mixtures work both fast and slow. Third, they make available more insulin during the first twelve hours than during the second twelve hours after injection. They protect the diabetic during the daytime when he is supposed to eat. They also maintain a normal urine and blood sugar during the night when insulin is needed to burn glucose reformed from the glycogen deposited in the liver, skin, muscles, and other organs.

One of the great advantages found by many doctors using mixtures is that the number of units of insulin necessary to maintain the diabetic in a normal condition is about one-third less when using mixtures than when using protamine zinc insulin, crystalline insulin or regular insulin separately. When the diabetic can reduce the number of units necessary and still maintain control, it has a beneficial psychologic effect. Here is a new insulin acting during the day, avoiding an extra dose of insulin before each meal, and acting at night avoiding a night dose of insulin. Here is a new insulin which when properly mixed to fit the need of the individual patient will not act too strongly or produce too much of a hypoglycemic effect, thus protecting the patient against insulin reactions.

In the treatment of diabetes there are certain mild cases that can be satisfactorily controlled with one injection of insulin no matter which type, in which the blood sugar level remains below 170 milligrams per cent during digestion and below 120 milligrams per cent while fasting. When protamine zinc insulin is given in the morning hypodermically, its action is longer than twenty-four hours and the overlap of its action will in some patients take care of breakfast the following morning and prevent them from showing sugar or a high blood sugar after that meal. Usually, however, extra quick acting regular or crystalline insulin must be given before the breakfast meal in order to prevent urinary sugar or a high blood sugar following that meal. The usual procedure heretofore has been to give the cloudy protamine zinc insulin about one-half to one hour before breakfast and to supplant this with the proper dose of clear regular or crystalline insulin about twenty minutes before breakfast. This was a real help in



controlling the moderately severe or severe diabetes, but it required two or more injections which were distasteful as well as time consuming. But now they can be safely mixed in a sterile bottle, or the two can be mixed in the syringe and the mixture given immediately.

The mixture should be given in the morning one-half hour before breakfast. The urine is then examined with the quick clinite method which requires about one minute of time. The syringe is rinsed with sterile water and dropped into a container of alcohol, and breakfast is eaten with very little change from the usual morning routine of most of us. A specimen of urine is secured about two hours after breakfast and tested. No other urinary tests are necessary except in the patient with a superimposed infection. Here every patient with diabetes should and must know that *infection always upsets diabetes*. In every instance the diabetic with fever, whether he is taking protamine zinc insulin alone or a mixture, must test for sugar every two hours around the clock. If the test is red the patient is instructed to take ten units of quick acting regular or crystalline insulin (they both act the same). If the test is yellow, he must take eight units of quick clear insulin. If the test is green or blue, no extra insulin is needed. If these rules are carried out by the patient, then diabetic coma does not develop.

In order to explain and understand mixtures of insulin one must know that for each 100 units of protamine zinc insulin as sold on the market today there is added 1.25 milligrams of protamine. This was the original amount of protamine that Hagedorn added when he first made protamine insulin. Actually all that is needed of protamine to precipitate 100 units of insulin protamine is .67 milligram. This excess of protamine was Hagedorn's idea, first in order to be sure that all the insulin was precipitated, and second that it joins with the tissue proteins at the point or depot of injection and further delays absorption of insulin, thus further lengthening its action. It was Scott's idea to add .2 milligram of zinc to each 100 units in order further to delay its action as well as to stabilize the suspension. Keeping the above in mind you can easily see that any less than equal parts of regular insulin added to protamine zinc insulin would give only the action of protamine zinc insulin because the insulin would act as any chemical mixture and hook onto the excess protamine and protamine insulin would be found in the precipitate. You would be surprised to find the number of diabetics who are adding from 10 to 15 units of regular insulin to 20 to 40 units of protamine zinc insulin thinking that they are getting the action of quick acting insulin as well as the slow.

When regular or crystalline insulin is added to protamine zinc insulin in larger than a 1:1 mixture the action becomes quicker; when less than a 1:1 mixture, the action becomes that of slower acting insulin.

The value of treating diabetes with the mixtures lies between a 1:1 up to a 5:1 mixture. Usually a 2:1 or a 3:1 mixture is used. The procedure is to examine a specimen of urine two hours after each meal and the first one voided in the morning. In this way the doctor can tell which insulin to use since it can be readily seen that a patient who shows no sugar during the night and the blood sugar is not elevated in the morning cannot use any other type than regular or crystalline insulin. If a mixture or protamine zinc insulin is given in the morning before breakfast, an insulin reaction will occur during the night because this slow acting insulin that works during the nighttime is used. You can readily see, therefore, that patients must be individualized.

As to the matter of diet when using mixtures of insulins, it is necessary to sacrifice some slight degree of intensity during the first twelve hours when treating the severe diabetic, and therefore a diet that is high in carbohydrate should not be used. According to Colwell, a diet which has the proportion of carbohydrate and fat in a ratio of 1:1 meets the needs best. The meals are divided into three equal meals with the exception of a small glass of milk and two crackers given at bedtime in order to prevent night insulin shocks. The protein is kept at approximately 1 gram per kilogram of body weight. The diet need not be weighed and can be set up for the patient on a card in simple form, in slices and cupsfuls.

Physicians treating diabetes throughout the United States have found the use of insulin mixtures beneficial, and it behooves the medical profession in Iowa to study this radical change from the accustomed methods of using insulin.

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#### REPORT OF THE MEETING OF THE HOUSE OF DELEGATES OF THE AMERICAN MEDICAL ASSOCIATION

The 1945 meeting of the House of Delegates of the American Medical Association was called to order in the Palmer House in Chicago Monday, December 3. The Reference Committee on Credentials reported that 170 of the 175 delegates were in attendance. In addition, there were many state society officers and editors present, so that the total attendance probably exceeded 300 persons.

Dr. George R. Minot of Boston was voted the Distinguished Service Award, following which Dr. Harrison H. Shoulders of Tennessee, Speaker of

the House, delivered a talk stressing the need for better public relations and education of the public, and emphasizing the progress that has been shown in the art and science of medicine. Dr. Shoulders brought out particularly the fact that there is such a thing as the soul of medicine, and that it must be preserved.

Dr. Herman L. Kretschmer, president, cited the need for active participation in organized medicine by all doctors. He felt all county societies should enlarge and expand their scientific programs, and that they should have regular organized meetings devoted to medical ethics and medical economics. He urged greater lay education on medical matters, and pointed out factors in the practice of medicine which he felt needed reform or expansion.

Dr. Roger I. Lee, president-elect, called for the infusion of new blood into the House of Delegates and prompt recognition of younger men returning from service. He acknowledged the advantage of continuity of service, but felt it was also advisable to keep up a steady change in personnel of boards and councils. He suggested it might be advisable in times like these to have a midwinter meeting of the House of Delegates which would have a tendency to improve relations with the state societies and the public. A mass of detail goes through the board of trustees and the House of Delegates, and a divided dose might be helpful.

The report of the trustees as published showed the finances of the Association were in a healthy condition. The work done under the direction of the trustees is very great, and its report and those of the various bureaus and councils were ample evidence of the many problems besetting the medical profession and showed a determined effort to hold high the standards already attained. The report of the Council on Medical Service and Public Relations covered a multitude of activities, surprising when it is realized it has been in existence only since June, 1943. Even so, there was a surprising tendency, in the many resolutions presented, to place still further responsibilities within the Council.

The resolutions presented under the head of new business dealt primarily with the following subjects: the need for a national voluntary medical prepayment plan sponsored by the medical profession; the problems of returning medical officers in finding residences for further training, in finding locations, in getting the benefits of the G.I. Bill, and in obtaining licenses to practice; a change in the public relations policy of the American Medical Association; continued opposition to government medicine; and the program of the Veterans Administration.

General Paul R. Hawley was asked to speak

to the group Monday afternoon on how he planned to handle the work of the Veterans Administration. Much of his talk was similar to that which was summarized in the November issue of our JOURNAL, page 481. He did say that since that time he had made arrangements in Michigan for the veterans to be cared for under a contract with Michigan Medical Service, and in Kansas through an arrangement with the State Society. He gave the impression of being determined to give the best possible medical care to the veterans, of feeling this would come from the civilian practice of medicine, and of being committed to the establishment of new hospitals near large medical centers where local talent can be utilized on a part time basis. He closed his talk with the statement that a free, unregimented profession could solve the problem.

The meetings Tuesday and Wednesday were devoted to the report of reference committees. In the House of Delegates of the American Medical Association, all reports of officers, bureaus and councils, and all resolutions are referred to reference committees. These reference committees hold hearings on the matters given to them, and anyone may appear before them and present his side of the case. Then the committee makes its decision and brings back its recommendation to the House, where it is acted upon by the whole assembly. If the House of Delegates tried to vote on everything brought before it, it would necessitate a much longer meeting and probably mean a great deal of confusion and debate. By the use of reference committees, small bodies debate and then pass upon the business, and bring back a recommendation. Such a recommendation is not always accepted, to be sure. Several were referred to committees during this session.

Establishment of a new Section on the General Practice of Medicine was approved by the House, as was General Hawley's program of medical care for veterans.

The Reference Committee on Medical Education and Hospitals had many matters referred to it. Some of them had already been worked out, others were in the process of being put into action, and others were approved. Dr. Lee's recommendation of an interim meeting of the House of Delegates, and establishment of the Bureau of Information in a permanent form, were both approved.

Space will not permit listing all of the recommendations, but doctors in Iowa will be interested in the outcome of the resolution calling for the establishment of a national voluntary prepayment medical care plan. The Council on Medical Serv-



## *President's Page*

### OBSERVATIONS ON THE HOUSE OF DELEGATES MEETING OF THE AMERICAN MEDICAL ASSOCIATION

Two things appealed to me at the recent meeting of the House of Delegates of the American Medical Association. One was the recommendation of the new president, Dr. Roger I. Lee, that semi-annual meetings of the House of Delegates might well be held to deal with the many problems affecting the medical profession. The American Medical Association has no group with authority to act between sessions of the House, nothing like our Executive Council, and the recommendation met with overwhelming approval and is a step in the right direction.

The outstanding feature of the meeting was the passing of a resolution presented by the Council on Medical Service and Public Relations calling for a national health plan. The background of this resolution is interesting. Last April a meeting of the presidents of seventeen state associations was held in Detroit to reach the grass roots of medicine. These representatives were pledged to study the needs of their own state and bring back statements of policy to be presented to the Council on Medical Service and Public Relations for transmittal to the House of Delegates. A second meeting was held prior to the meeting of the House, with more than forty states represented, and the resolution coming from this group was a true expression of the sentiment of the rank and file of the medical profession.

The Council on Medical Service and Public Relations also held two meetings with the same objective, one in October and one in November, and consequently its resolution, emanating as it did from the presidents and representatives of all states, carried the weight of study, thought, and desire.

In my knowledge, this is the first time a subject of such vast importance to the Association has been presented to the House of Delegates after detailed study and in concrete form. A mandate has been given to the trustees and the Council on Medical Service and Public Relations to prepare and activate a national health plan. This should accomplish much toward an answer to government medicine, and I am sure we in Iowa are strong in approval.

*R. D. Bernard, M.D.*

President, Iowa State Medical Society.

# Roster of Iowa Physicians in Military Service

As of December 21, 1945

## Adams County

Bain, C. L., Corning (Fleet PO, San Francisco, Cal.) .....Lt. Comdr., U.S.N.R.

## Allamakee County

Ivens, M. H., Waukon (Miami Beach, Fla.) .....Capt., A.U.S.

## Appanoose County

Condon, F. J., Centerville (Owensboro, Ky.)...Major, U.S.P.H.S.  
Edwards, R. R., Centerville (APO 758, New York, N. Y.) .....Major, A.U.S.  
Huston, M. D., Centerville (Hot Springs, Ark.) .....Capt., A.U.S.

## Benton County

Senfeld, Sidney, Belle Plaine

## Black Hawk County

Bickley, D. W., Waterloo (APO New York, N. Y.)...Capt., A.U.S.  
Bickley, J. W., Waterloo (APO 956, San Francisco, Cal.) .....Capt., A.U.S.  
Butts, J. H., Waterloo (Galveston, Texas).....Comdr., U.S.N.R.  
Cooper, C. N., Waterloo (Fleet PO, San Francisco, Cal.) .....Lt. Comdr., U.S.N.R.  
Ericsson, M. G., Cedar Falls (Fort Bragg, N. Car.)...Capt., A.U.S.  
Hartman, H. J., Waterloo (APO 33, San Francisco, Cal.) .....Capt., A.U.S.  
Hoyt, C. N., Cedar Falls (APO 635, New York, N. Y.) .....Capt., A.U.S.  
Marquis, F. M., Waterloo (APO 513, New York, N. Y.) .....Capt., A.U.S.  
O'Keefe, P. T., Waterloo (APO 79, New York, N. Y.) .....Capt., A.U.S.  
Rohlf, E. L., Jr., Waterloo .....Major, A.U.S.  
Seibert, C. W., Waterloo (Colorado Springs, Colo.)...Major, A.U.S.  
Smith, R. G., Cedar Falls (APO 512, New York, N. Y.) .....Major, A.U.S.  
Trunnell, T. L., Waterloo (Parris Island, S. Car.)...Lt. U.S.N.R.

## Boone County

Brewster, E. S., Boone (APO 254, New York, N. Y.)...Major, A.U.S.  
Healy, M. J., Boone (Fort Sill, Okla.) .....Capt., A.U.S.

## Bremer County

Blum, O. S., Waverly (Fleet PO, San Francisco, Cal.) .....Lt., U.S.N.R.

## Buchanan County

Hersey, N. L., Independence (Astoria, Ore.)...Lt. Comdr., U.S.N.R.

## Buena Vista County

Hansen, R. R., Storm Lake .....Lt., U.S.N.R.  
Shope, C. D., Storm Lake (Fort Des Moines, Ia.)...Capt., A.U.S.  
Witte, H. J., Marathon (APO 350, New York, N. Y.) .....Major, A.U.S.

## Butler County

James, R. A., Allison (Mare Island, Cal.)

## Calhoun County

McVay, M. J., Lake City (Waco, Texas) .....Capt., A.U.S.  
Peek, L. H., Lake City (Camp Carson, Colo.) .....Capt., A.U.S.  
Stevenson, W. W., Rockwell City (Seattle, Wash.) .....Lt. Comdr., U.S.N.R.

## Carroll County

Cochran, J. L., Carroll (Gulfport, Miss.)  
Freedland, Maurice, Coon Rapids  
Scannell, R. C., Carroll (Denver, Colo.) .....Capt., A.U.S.  
Wyatt, M. R., Manning (Chatham Field, Ga.) .....Capt., A.U.S.

## Cass County

Ergenbright, W. V., Atlantic (APO 331, San Francisco, Cal.) .....Capt., A.U.S.  
Peterson, M. T., Atlantic (Fleet PO, San Francisco, Cal.) .....Capt., A.U.S.  
Schiff, Joseph, Anita (Walla Walla, Wash.) .....Capt., A.U.S.

## Cedar County

Laughlin, R. M., Tipton (San Diego, Cal.) .....Lt., U.S.N.R.

## Cerro Gordo County

Adams, C. O., Mason City (Fort Lewis, Wash.)...Major, A.U.S.  
Egloff, W. C., Mason City (Jefferson Barracks)....Capt., A.U.S.  
Fitzpatrick, M. R., Mason City (Carlisle Barracks, Pa.) .....1st Lt., A.U.S.  
Harris, R. H., Mason City (Dyersburg, Tenn.) .....Capt., A.U.S.  
Harrison, G. E., Mason City .....Col., A.U.S.  
Morgan, P. W., Mason City (APO 89, New York, N. Y.) .....Capt., A.U.S.  
Mullen, L. M., Mason City .....Capt., A.U.S.  
Tice, G. I., Mason City (Mare Island, Cal.) .....Lt. (jg), U.S.N.R.  
Tice, W. A., Mason City (Ft. Eustis, Va.) .....Lt. (jg), U.S.N.R.  
Woodward, E. R., Mason City (Great Lakes, Ill.) .....Lt., U.S.N.R.

## Cherokee County

Blacklock, G. D., Washta (APO 17583, New York, N. Y.) .....Capt., A.U.S.

## Chickasaw County

O'Connor, E. C., New Hampton (Salinas, Cal.) .....Capt., A.U.S.

## Clarke County

Armitage, G. I., Murray (APO 629, New York, N. Y.) .....Capt., A.U.S.

## Clayton County

Glesne, O. G., Monona (Knoxville, Iowa) .....Capt., A.U.S.

## Clinton County

Amesbury, H. A., Clinton (APO 218, New York, N. Y.) .....Major, A.U.S.  
Burke, J. C., Clinton (Great Bend, Kan.) .....A.U.S.  
Ellison, G. M., Clinton (APO 9030, New York, N. Y.) .....Capt., A.U.S.  
O'Donnell, J. E., Clinton (Fleet PO, San Francisco, Cal.) .....Lt., U.S.N.R.  
Riedesel, E. V., Wheatland (Fort Douglas, Utah)  
Speigel, I. J., Clinton (Galesburg, Ill.) .....Capt., A.U.S.  
Van Epps, E. F., Clinton .....Capt., A.U.S.  
Waggoner, C. V., Clinton (Fleet PO, San Francisco, Cal.) .....Lt. Comdr., U.S.N.R.  
Wells, L. L., Clinton (APO 562, New York, N. Y.)...Capt., A.U.S.

## Crawford County

Grau, A. H., Denison (Oceanside, Cal.) .....Comdr., U.S.N.R.

## Dallas-Guthrie Counties

Butterfield, E. T., Dallas Center (Palm Springs, Cal.) .....1st Lt., A.U.S.  
Byrnes, A. W., Guthrie Center (Fort Custer, Mich.)...Major, A.U.S.  
Fail, C. S., Adel (Fleet PO, San Francisco, Cal.)...Lt. U.S.N.R.  
Margolin, J. M., Perry (APO 350, New York, N. Y.) .....Capt., A.U.S.  
McGilvera, R. I., Guthrie Center .....Lt., U.S.N.R.  
Mullmann, A. J., Adel (APO 565, San Francisco, Cal.) .....Capt., A.U.S.  
Osborn, C. R., Dexter .....Lt., U.S.N.R.

## Delaware County

Baumgarten, Oscar, Earlville (APO 689, New York, N. Y.) .....Capt., A.U.S.  
Clark, R. E., Manchester (APO 419, New York, N. Y.) .....Capt., A.U.S.

## Des Moines County

Eigenfeld, M. L., Burlington (Cleveland, Ohio)....1st Lt., A.U.S.  
Heitzman, P. O., Burlington (Fort Lewis, Wash.)...Capt., A.U.S.  
Sage, E. C., Burlington (Fleet PO, San Francisco, Cal.) .....Lt. Comdr., U.S.N.R.

## Dickinson County

Buchanan, J. J., Milford (Fleet PO, San Francisco, Cal.) .....Lt. Comdr., U.S.N.R.  
Henning, G. G., Milford (San Antonio, Texas)....Major, A.U.S.

## Dubuque County

Anderson, E. E., Dubuque (Bradley Field, Conn.)...Capt., A.U.S.  
Cunningham, J. C., Dubuque (Fairfield, Ohio) .....Capt., A.U.S.  
Edstrom, Henry, Dubuque (APO 645, New York, N. Y.) .....Major, A.U.S.  
Hall, C. B., Dubuque (APO 11331, New York, N. Y.) Capt., A.U.S.  
Knoll, A. H., Dubuque (San Francisco, Cal.) .....Major, A.U.S.  
Langford, W. R., Epworth (Miami Beach, Fla.) .....Capt., A.U.S.  
Lavery, H. B., Dubuque (Washington, D. C.) .....Lt. Col., A.U.S.  
Leik, D. W., Dubuque (Wichita Falls, Tex.) .....Capt., A.U.S.  
Mueller, J. J., Dubuque (APO 230, New York, N. Y.) Capt., A.U.S.  
Olson, P. F., Dubuque (San Francisco, Cal.)...Lt. Comdr., U.S.N.R.  
Painter, R. C., Dubuque (Salt Lake City, Utah)....Lt., U.S.N.R.  
Scharle, Theodore, Dubuque (Ft. Sam Houston, Texas) .....Capt., A.U.S.  
Schueller, C. J., Dubuque (APO 384, New York, N. Y.) .....1st Lt., A.U.S.  
Smith, C. W., Dubuque (Shoemaker, Cal.) .....Lt., U.S.N.R.  
Straub, J. J., Dubuque (Bethesda, Md.) .....Lt. Comdr., U.S.N.R.

## Emmet County

Collins, L. E., Estherville (APO 247, San Francisco, Cal.) .....1st Lt., A.U.S.  
Miller, O. H., Estherville (Seattle, Wash.)...Lt. Comdr., U.S.N.R.

## Fayette County

Henderson, W. B., Oelwein (APO 234, San Francisco, Cal.) .....Lt. Col., A.U.S.  
Sulzbach, J. F., Oelwein  
Walsh, E. W., Hawkeye (Huntington, W. Va.) .....A.U.S.  
Walsh, W. E., Hawkeye (Fleet PO, San Francisco, Cal.) .....Lt. Comdr., U.S.N.R.

## Floyd County

Huber, R. H., Charles City .....1st Lt., A.U.S.  
Mackie, D. G., Charles City (Danville, Ill.) .....Capt., A.U.S.  
Magdsick, Carl, Charles City (Fleet PO, San Francisco, Cal.) .....Lt. (jg), U.S.N.R.  
Miner, J. B., Jr., Charles City (San Diego, Cal.)...Lt., U.S.N.R.



**Franklin County**

Hedgecock, L. E., Hampton (Camp Lejeune, N. Car.) .....Lt. Comdr., U.S.N.R.  
 Randall, W. L., Hampton (Fleet PO, San Francisco, Cal.) .....Lt. Comdr., U.S.N.R.

**Fremont County**

Kerr, W. H., Hamburg (APO 926, San Francisco, Cal.) .....Capt., A.U.S.  
 Powell, R. A., Farragut (Fleet PO, San Francisco, Cal.) .....Lt. (jg), U.S.N.R.  
 Wanamaker, A. R., Hamburg .....Major, A.U.S.

**Greene County**

Cartwright, F. P., Grand Junction (APO 511, New York, N. Y.) .....Capt., A.U.S.  
 Castles, W. A., Rippey (APO 958, San Francisco, Cal.) .....Major, A.U.S.

**Grundy County**

Cullison, R. M., Dike (Fort Howard, Md.) .....Major, A.U.S.  
 Rose, J. E., Grundy Center (Fleet PO, New York, N. Y.) .....Lt. Comdr., U.S.N.R.

**Hamilton County**

Mooney, F. P., Jewell (APO 339, New York, N. Y.) .....Capt., A.U.S.  
 Paschal, G. A., Williams (Camp Crowder, Mo.) .....Capt., A.U.S.  
 Patterson, R. A., Webster City (San Diego, Cal.) .....Lt. Comdr., U.S.N.R.  
 Ptacek, J. L., Webster City (APO 140, New York, N. Y.) .....Capt., A.U.S.  
 Schrader, M. A., Webster City (Topeka, Kan.) .....1st Lt., A.U.S.

**Hancock-Winnebago Counties**

Eller, L. W., Kanawha (APO 302, New York, N. Y.) .....Capt., A.U.S.  
 Irish, T. J., Forest City (San Diego, Cal.) .....Comdr., U.S.N.R.  
 Shaw, D. F., Britt (APO 334, San Francisco, Cal.) .....Major, A.U.S.  
 Thomas, C. W., Forest City (APO 519, New York, N. Y.) .....Major, A.U.S.

**Hardin County**

Johnson, R. J., Iowa Falls (APO 514, New York, N. Y.) .....Capt., A.U.S.  
 Johnson, W. A., Alden (Orlando, Fla.) .....Capt., A.U.S.  
 Steenrod, E. J., Iowa Falls (Oceanside, Cal.) .....Lt. Comdr., U.S.N.R.  
 Todd, V. S., Eldora (APO 70, San Francisco, Cal.) .....Capt., A.U.S.

**Harrison County**

Byrnes, C. W., Dunlap (APO 980, Seattle, Wash.) .....Capt., A.U.S.  
 Tamsislea, F. X., Missouri Valley (APO 562, New York, N. Y.) .....Capt., A.U.S.

**Henry County**

Brown, W. B., Mount Pleasant (APO 571, New York, N. Y.) .....Major, A.U.S.  
 Cogan, Samuel, Mt. Pleasant  
 Dwankowski, Carl, Mt. Pleasant (APO 511, New York, N. Y.) .....Major, A.U.S.  
 Gloeckler, B. B., Mount Pleasant (APO 9768, New York, N. Y.) .....Capt., A.U.S.  
 Megorden, W. H., Mount Pleasant (Ogden, Utah) .....Capt., A.U.S.  
 Ristine, L. F., Mount Pleasant (APO 9648, New York, N. Y.) .....Major, A.U.S.

**Humboldt County**

Arent, A. S., Humboldt (Stockton, Cal.) .....Capt., A.U.S.  
 Coddington, J. H., Humboldt (APO 719, San Francisco, Cal.) .....Capt., A.U.S.

**Ida County**

Martin, J. W., Holstein (Albany, Ga.) .....Capt., A.U.S.

**Iowa County**

Geiger, U. S., North English (San Diego, Cal.) .....Lt. Comdr., U.S.N.R.  
 McDaniel, J. D., Marengo (APO 1010, San Francisco, Cal.) .....Capt., A.U.S.  
 Miller, D. F., Williamsburg (San Diego, Cal.) .....Lt., U.S.N.R.

**Jackson County**

Bausch, R. G., Bellevue (APO 251, New York, N. Y.) .....Capt., A.U.S.  
 Skelley, P. B., Jr., Maquoketa (APO 247, San Francisco, Cal.) .....1st Lt., A.U.S.

**Jasper County**

Doake, Clarke, Newton .....1st Lt., A.U.S.  
 Ritchey, S. J., Newton .....Lt. Col., A.U.S.

**Jefferson County**

Castell, J. W., Fairfield (Ft. Sam Houston, Texas) .....Capt., A.U.S.  
 Frey, Harry, Fairfield (Norfolk, Va.) .....Lt. Comdr., U.S.N.R.  
 Graber, H. E., Fairfield (APO 18642, San Francisco, Cal.) .....Lt. Col., A.U.S.  
 Taylor, I. C., Fairfield (Washington, D. C.) .....1st Lt., A.U.S.

**Johnson County**

Albert, S. M., Iowa City (APO 9622, New York, N. Y.) .....1st Lt., A.U.S.

Bunge, R. G., Iowa City (Orlando, Fla.) .....Capt., A.U.S.  
 Callahan, G. D., Iowa City (Fleet PO, San Francisco, Cal.) .....Lt., U.S.N.R.  
 Cobb, E. A., Iowa City (APO 14987, San Francisco, Cal.) .....1st Lt., A.U.S.  
 Coburn, F. E., Iowa City (Toronto, Canada) .....Capt., R.C.A.  
 Crowell, E. A., Iowa City (Ft. Geo. Wright, Wash.) .....Capt., A.U.S.  
 Diddle, A. W., Iowa City (Fleet PO, San Francisco, Cal.) .....Lt. Comdr., U.S.N.R.  
 Elmquist, H. S., Iowa City (San Diego, Cal.) .....Lt. Comdr., U.S.N.R.  
 Emmons, M. B., Iowa City (Camp Bowie, Texas) .....Capt., A.U.S.  
 Evers, L. B., Iowa City .....Major, U.S.P.H.S.  
 Field, Grace E., Iowa City .....Major, U.S.P.H.S.  
 Flax, Ellis, Iowa City (APO 758, New York, N. Y.) .....1st Lt., A.U.S.  
 Fourt, A. S., Iowa City (APO 34, New York, N. Y.) .....Lt. Col., A.U.S.  
 Francis, N. L., Iowa City (Annapolis, Md.) .....Lt. (jg), U.S.N.R.  
 Galinsky, L. J., Oakdale (APO 433, New York, N. Y.) .....Capt., A.U.S.  
 Hartung, Walter, Iowa City (Camp Carson, Colo.) .....Capt., A.U.S.  
 Hessin, A. L., Iowa City (APO 469, New York, N. Y.) .....Major, A.U.S.  
 Irwin, R. L., Iowa City (Fleet PO, San Francisco, Cal.) .....Capt., U.S.N.R.  
 January, L. E., Iowa City (Pyote, Texas) .....Major, A.U.S.  
 Kanealy, J. F., Iowa City (APO 928, San Francisco, Cal.) .....1st Lt., A.U.S.  
 Keislar, H. D., Iowa City (Washington, D. C.) .....Capt., A.U.S.  
 Lage, R. H., Iowa City (San Francisco, Cal.) .....Lt., U.S.N.R.  
 Laubscher, J. H., Iowa City (Ft. Benning, Ga.) .....1st Lt., A.U.S.  
 Moreland, F. B., Iowa City (Maxwell Field, Ala.) .....1st Lt., A.U.S.  
 Nagyfy, S. F., Iowa City (Fleet PO, New York, N. Y.) .....Lt., U.S.N.R.  
 Newman, R. W., Iowa City (Jacksonville, Fla.) .....Lt. Comdr., U.S.N.R.  
 Parkin, G. L., Iowa City (Mountain Home, Idaho) .....1st Lt., A.U.S.  
 Ringrose, E. J., Iowa City  
 Sells, R. L., Jr., Iowa City (Palmdale, Cal.) .....Capt., A.U.S.  
 Smith, H. F., Iowa City (Fleet PO, San Francisco, Cal.) .....Lt. Comdr., U.S.N.R.  
 Speidel, G. P., Oakdale (Oteen, N. Car.) .....Capt., A.U.S.  
 †Springer, E. W., Iowa City (APO 678, New York, N. Y.) .....Capt., A.U.S.  
 Stadler, H. E., Iowa City (Washington, D. C.) .....1st Lt., A.U.S.  
 Stephens, R. L., Iowa City (Orlando, Fla.) .....Capt., A.U.S.  
 Stump, R. B., Iowa City (Denver, Colo.) .....Capt., A.U.S.  
 Titus, E. L., Iowa City (Los Angeles, Cal.) .....Col., A.U.S.  
 Trapasso, T. J., Iowa City (APO 520, New York, N. Y.) .....Capt., A.U.S.  
 Trussell, R. E., Iowa City (APO 75, San Francisco, Cal.) .....Capt., A.U.S.  
 Voelker, C. A., Jr., Iowa City .....Capt., A.U.S.  
 Ward, R. H., Iowa City (Jacksonville, Fla.) .....Lt. Comdr., U.S.N.R.  
 Weatherly, H. E., Iowa City (APO 74, San Francisco, Cal.) .....Major, A.U.S.  
 Wollmann, W. W., Iowa City (Louisville, Ky.) .....1st Lt., A.U.S.  
 Ziffren, S. E., Iowa City (Springfield, Mo.) .....1st Lt., A.U.S.

**Junior Members**

†Adams, M. P., Iowa City (Fleet PO, San Francisco, Cal.) .....Lt. (jg), U.S.N.R.  
 Ahrens, J. H., Iowa City (APO San Francisco, Cal.) .....A.U.S.  
 Ball, A. L., Iowa City (Camp Polk, La.) .....Major, A.U.S.  
 Barrent, M. E., Iowa City (Camp Tyson, Tenn.) .....Capt., A.U.S.  
 Black, N. M., Iowa City (APO New York, N. Y.) .....Capt., A.U.S.  
 Blair, J. D., Iowa City (APO San Francisco, Cal.) .....Major, A.U.S.  
 Boyd, R. J., Iowa City (Spokane, Wash.) .....Capt., A.U.S.  
 Brintnall, E. S., Iowa City (APO New York, N. Y.) .....Major, A.U.S.  
 Burr, S. P., Iowa City (APO San Francisco, Cal.) .....1st Lt., A.U.S.  
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 Connole, J. F., Iowa City (Camp Bowie, Texas) .....1st Lt., A.U.S.  
 Couch, O. A., Iowa City (Camp Van Dorn, Miss.) .....1st Lt., A.U.S.  
 Coulson, F. H., Iowa City (APO New York, N. Y.) .....Capt., A.U.S.  
 Decker, C. E., Iowa City (Oklahoma City, Okla.) .....1st Lt., A.U.S.  
 Ehrenhaft, J. L., Iowa City (APO New York, N. Y.) .....Capt., A.U.S.  
 Freiberg, M., Iowa City (Jefferson Barracks, Mo.) .....A.U.S.  
 Hamilton, H. E., Iowa City (Chicago, Ill.) .....1st Lt., A.U.S.  
 Harms, G. E., Iowa City (Carlisle Barracks, Penn.) .....1st Lt., A.U.S.  
 Hendricks, A. B., Iowa City (Fleet PO, San Francisco, Cal.) .....Lt. Comdr., U.S.N.  
 Hovis, Wm., Iowa City (Fleet PO, San Francisco, Cal.) .....Lt. (jg), U.S.N.R.  
 Ide, L. W., Iowa City (Fort Warren, Wyo.) .....1st Lt., A.U.S.  
 Kaplan, Nathan, Iowa City (Carlisle Barracks, Pa.) .....1st Lt., A.U.S.  
 Keil, P. G., Iowa City (Sioux City, Iowa) .....1st Lt., A.U.S.  
 Kelberg, M. R., Iowa City (Alameda, Cal.) .....Lt., U.S.N.R.  
 Keleher, M. F., Iowa City (Great Lakes, Ill.) .....Lt. (jg), U.S.N.R.  
 Kugler, F. E., Iowa City (Fort Warren, Wyo.) .....Capt., A.U.S.  
 Lowry, F. C., Iowa City (Sioux Falls, S. D.) .....1st Lt., A.U.S.  
 McCann, J. P., Iowa City (Carlisle Barracks, Penn.) .....1st Lt., A.U.S.  
 McQuiston, W. O., Iowa City (APO San Francisco, Cal.) .....Capt., A.U.S.  
 Moen, B. H., Iowa City (APO 755, New York, N. Y.) .....Capt., A.U.S.  
 Moon, R. E., Iowa City (APO New York, N. Y.) .....1st Lt., A.U.S.  
 Odell, Lester, Iowa City (Pensacola, Fla.) .....Lt. (jg), U.S.N.R.  
 Phillips, R. M., Iowa City (San Francisco, Cal.) .....1st Lt., A.U.S.  
 Randall, R. G., Iowa City (Waterloo, Iowa) .....Capt., A.U.S.

Rosenbusch, M., Iowa City (Fort Leonard Wood, Mo.) ..... 1st Lt., A.U.S.  
 Russin, L. A., Iowa City (Fort Blanding, Fla.) ..... Capt., A.U.S.  
 Saar, J. L., Iowa City (APO New York, N. Y.) ..... Major, A.U.S.  
 Sawtelle, W. W., Iowa City ..... Lt., U.S.N.R.  
 Schwidde, J. T., Iowa City (Carlisle Barracks, Penn.) ..... 1st Lt., A.U.S.  
 Shand, J. A., Iowa City (Carlisle Barracks, Penn.) ..... 1st Lt., A.U.S.  
 Shapiro, S. I., Iowa City ..... A.U.S.  
 Simpson, F. E., Iowa City (Camp Grant, Ill.) ..... Lt. Comdr., U.S.N.R.  
 Skewis, J. E., Iowa City (Corona, Cal.) ..... Lt. Comdr., U.S.N.R.  
 Skouge, O. T., Iowa City ..... Lt. Comdr., U.S.N.R.  
 Towle, R. A., Iowa City (Jacksonville, Fla.) ..... Lt. Comdr., U.S.N.R.  
 Warren, R. F., Iowa City (Santa Barbara, Cal.) ..... A.U.S.  
 Watters, V. G., Iowa City (Fort Leonard Wood, Mo.) ..... 1st Lt., A.U.S.  
 Wicks, W. J., Iowa City (Camp Crowder, Mo.) ..... Capt., A.U.S.  
 Williams, L. A., Iowa City (Treasure Island, Cal.) ..... 1st Lt., A.U.S.  
 Willumsen, H. C., Iowa City (Denver, Colo.) ..... Capt., A.U.S.  
 Wolkin, J., Iowa City (San Antonio, Texas) ..... Capt., A.U.S.  
 Yetter, W. L., Iowa City (APO New York, N. Y.) ..... Major, A.U.S.  
 Zahrt, N. E., Iowa City (Keesler Field, Miss.) ..... Capt., A.U.S.  
 Zimmerman, H. A., Iowa City (Santa Ana, Cal.) ..... 1st Lt., A.U.S.

#### Keokuk County

Engelmann, A. T., What Cheer (Camp Polk, La.) ..... Capt., A.U.S.  
 Graham, J. A., Gibson (Needles, Cal.) ..... 1st Lt., A.U.S.

#### Kossuth County

Clapsaddle, D. W., Burt (Manhattan, Kan.) ..... Capt., A.U.S.  
 Corbin, R. L., Luverne (Des Moines, Iowa) ..... Capt., A.U.S.  
 Kenefick, J. N., Algona (Fleet PO, San Francisco, Cal.) ..... Comdr., U.S.N.R.  
 Williams, R. L., Lakota (Iowa City, Iowa) ..... Lt. Comdr., U.S.N.R.

#### Lee County

Cleary, H. G., Fort Madison (Ft. Benning, Ga.) ..... Capt., A.U.S.  
 Johnstone, A. A., Keokuk (APO 942, Seattle, Wash.) ..... Col., A.U.S.  
 McKee, T. L., Keokuk (Ft. Lauderdale, Fla.) ..... Major, A.U.S.  
 Rankin, J. R., Keokuk (Memphis, Tenn.) ..... Lt. Comdr., U.S.N.R.  
 Richmond, A. C., Fort Madison (San Bruno, Cal.) ..... Comdr., U.S.N.R.  
 Younan, Thomas, Ft. Madison (APO 758, New York, N. Y.) ..... Capt., A.U.S.

#### Linn County

Block, W. M., Cedar Rapids (Memphis, Tenn.) ..... Capt., A.U.S.  
 Chapman, R. M., Cedar Rapids (Chicago, Ill.) ..... Major, A.U.S.  
 Coughlan, V. H., Coggon (Fort Snelling, Minn.) ..... A.U.S.  
 Dunn, F. C., Cedar Rapids (La Junta, Colo.) ..... Major, A.U.S.  
 Gearhart, Merriam, Springville (APO 513, New York, N. Y.) ..... Major, A.U.S.  
 Gerstman, Herbert, Marion ..... Capt., A.U.S.  
 Hecker, J. T., Cedar Rapids (APO 408, New York, N. Y.) ..... Capt., A.U.S.  
 Kruckenbergh, W. G., Mount Vernon (Fleet PO, San Francisco, Cal.) ..... Lt., U.S.N.R.  
 Leedham, C. L., Springville (Camp Campbell, Ky.) ..... Col., A.U.S.  
 Locher, R. C., Cedar Rapids (Temple, Texas) ..... Major, A.U.S.  
 MacDougal, R. F., Cedar Rapids (APO 9057, New York, N. Y.) ..... Capt., A.U.S.  
 McConkie, E. B., Cedar Rapids (Hines, Ill.) ..... Major, A.U.S.  
 McQuiston, J. S., Cedar Rapids (Fort Warren, Wyo.) ..... Lt. Col., A.U.S.  
 Murray, E. S., Cedar Rapids (APO 512 New York, N. Y.) ..... Lt. Col., A.U.S.  
 Netolicky, R. Y., Cedar Rapids (Hawthorne, Nev.) ..... Lt. Comdr., U.S.N.R.  
 Noble, W. C., Cedar Rapids (Camp San Luis Obispo, Cal.) ..... 1st Lt., A.U.S.  
 Noe, C. A., Cedar Rapids (Hot Springs, Ark.) ..... Major, A.U.S.  
 Rieniets, J. H., Cedar Rapids, (Charleston, S. Car.) ..... Comdr., U.S.N.R.  
 Smrha, J. A., Cedar Rapids (Topeka, Kan.) ..... Capt., A.U.S.  
 Wray, R. M., Cedar Rapids ..... Major, A.U.S.  
 Yavorsky, W. D., Cedar Rapids (Fleet PO, San Francisco, Cal.) ..... Comdr., U.S.N.R.

#### Louisa County

DeYarman, K. T., Morning Sun (San Antonio, Texas) ..... Capt., A.U.S.  
 Tandy, R. W., Morning Sun (Oakland, Cal.) ..... Lt. Comdr., U.S.N.R.

#### Lucas County

Lister, K. E., Chariton (Fort Snelling, Minn.) ..... A.U.S.

#### Lyon County

Cook, S. H., Rock Rapids (Camp Chaffee, Ark.) ..... Major, A.U.S.  
 Moriarity, F. J., Rock Rapids (Corvallis, Ore.) ..... Capt., A.U.S.

#### Madison County

Chesnut, P. F., Winterset (APO 411, New York, N. Y.) ..... Capt., A.U.S.

#### Mahaska County

Bennett, G. W., Oskaloosa (APO 9641, San Francisco, Cal.) ..... Lt. Col., A.U.S.  
 Bos, H. C., Oskaloosa (APO 758, New York, N. Y.) ..... Major, A.U.S.  
 Clark, G. H., Oskaloosa (Fleet PO, San Francisco, Cal.) ..... Lt. Comdr., U.S.N.R.

Gillett, R. M., Oskaloosa (Fleet PO, San Francisco, Cal.) ..... Capt., U.S.N.  
 Greenlee, M. R., Oskaloosa (Fleet PO, San Francisco, Cal.) ..... Comdr., U.S.N.R.  
 Hibbs, R. E., Oskaloosa ..... Major, A.U.S.  
 Keohen, G. F., Oskaloosa (APO 4299, San Francisco, Cal.) ..... Major, A.U.S.  
 Lemon, K. M., Oskaloosa (APO 637, New York, N. Y.) ..... Capt., A.U.S.  
 Shurts, J. J., Oskaloosa (Fort Mason, Cal.) ..... Capt., A.U.S.  
 Zager, L. L., Oskaloosa (APO 436, New York, N. Y.) ..... Capt., A.U.S.

#### Marion County

Ralston, F. P., Knoxville (Indio, Cal.) ..... Capt., A.U.S.  
 Schiek, C. M., Knoxville ..... Lt. Comdr., U.S.N.R.  
 Schroeder, M. C., Pella (Camp Livingston, La.) ..... Capt., A.U.S.  
 Williams, D. B., Knoxville ..... Capt., A.U.S.

#### Marshall County

Marble, E. J., Marshalltown (Fleet PO, Can Francisco, Cal.) ..... Lt. Comdr., U.S.N.R.  
 Marble, W. P., Marshalltown (Colorado Springs, Colo.) ..... Major, A.U.S.  
 Wells, R. C., Marshalltown (Gowen Field, Idaho) ..... Capt., A.U.S.  
 Wolfe, R. M., Marshalltown (Los Alamitos, Cal.) ..... Lt. Comdr., U.S.N.R.

#### Mills County

DeYoung, W. A., Glenwood (APO 562, New York, N. Y.) ..... Capt., A.U.S.  
 Kuitert, J. H., Glenwood (St. Cloud, Minn.) ..... Major, A.U.S.

#### Mitchell County

Culbertson, R. A., St. Ansgar (APO 331, San Francisco, Cal.) ..... Lt. Col., A.U.S.  
 Owen, W. E., Osage (San Diego, Cal.) ..... Lt., U.S.N.  
 Walker, T. G., Riceville (Hutchinson, Kan.) ..... Lt. Comdr., U.S.N.R.

#### Monona County

Almer, L. E., Moorhead (Fort Knox, Ky.) ..... Capt., A.U.S.  
 Ganzhorn, H. L., Mapleton (APO 72, San Francisco, Cal.) ..... Capt., A.U.S.  
 Harlan, M. E., Onawa (Fleet PO, San Francisco, Cal.) ..... Lt. (jg), U.S.N.R.  
 Stauch, M. O., Whiting (Fort Lewis, Wash.) ..... Major, A.U.S.  
 Wainwright, M. T., Mapleton (Hines, Ill.) ..... Capt., A.U.S.

#### Monroe County

Bay, F. N., Albia ..... Lt. Comdr., U.S.N.R.  
 Gilliland, C. H., Albia (Fleet PO, San Francisco, Cal.) ..... Lt. Comdr., U.S.N.  
 Heimann, V. R., Albia (Camp Maxey, Texas) ..... Capt., A.U.S.  
 Smith, R. A., Albia (New Cumberland, Pa.) ..... Capt., A.U.S.

#### Montgomery County

Hansen, F. A., Red Oak (Hitchcock, Texas) ..... Lt., U.S.N.R.  
 Nelson, C. C., Red Oak (Atlantic City, N. J.) ..... Lt., U.S.N.R.  
 Panzer, E. J. C., Stanton (Point Montana, Cal.) ..... Lt., U.S.N.R.  
 Rost, G. S., Red Oak (Halstead, Kan.) ..... Capt., A.U.S.  
 Sorensen, E. M., Red Oak (Jefferson Barracks, Mo.) ..... Capt., A.U.S.

#### Muscatine County

Asthalter, R. W., Muscatine (Fort Meade, Md.) ..... 1st Lt., A.U.S.  
 Carlson, E. H., Muscatine (APO 180, San Francisco, Cal.) ..... Major, A.U.S.  
 Goad, R. R., Muscatine (Memphis, Tenn.) ..... Comdr., U.S.N.R.  
 Kimball, J. E., Jr., West Liberty (Sioux City, Iowa) ..... Major, A.U.S.  
 Muhs, E. O., Muscatine (APO 578, New York, N. Y.) ..... Major, A.U.S.  
 Norem, Walter, Muscatine (APO Miami, Fla.) ..... Capt., A.U.S.  
 Robertson, T. A., West Liberty (APO 119, New York, N. Y.) ..... Capt., A.U.S.  
 Sywassink, G. A., Muscatine (APO 488-"Y" Forces, New York, N. Y.) ..... Lt. Col., A.U.S.  
 Whitmer, L. H., Wilton Junction (Fort Sill, Okla.) ..... Lt. Col., A.U.S.

#### O'Brien County

Getty, E. B., Primghar (APO 153, New York, N. Y.) ..... Capt., A.U.S.  
 Moen, S. T., Hartley (St. Louis, Mo.) ..... Lt. Col., A.U.S.

#### Osceola County

Kuntz, G. S., Sibley (APO 34, New York, N. Y.) ..... Capt., A.U.S.

#### Page County

Barnes, C. A., Shenandoah ..... Major, A.U.S.  
 Bauer, Frank, Shenandoah (APO New York, N. Y.) ..... A.U.S.  
 Blackman, Nathan, Clarinda (Ft. Benj. Harrison, Ind.) ..... Major, A.U.S.  
 Brush, Frederick, Shenandoah (APO New York, N. Y.) ..... A.U.S.  
 Burdick, F. D., Shenandoah (Denver, Colo.) ..... Capt., A.U.S.  
 Burnett, F. K., Clarinda (Cheyenne, Wyo.) ..... Major, A.U.S.  
 Rauch, G. R., Clarinda (Sioux City, Iowa) ..... Capt., A.U.S.  
 Savage, L. W., Shenandoah (Fort Meade, Md.) ..... 1st Lt., A.U.S.  
 Schwidde, Tilford, Shenandoah (APO New York, N. Y.) ..... A.U.S.

#### Plymouth County

Bowers, C. V., LeMars (APO New York, N. Y.) ..... 1st Lt., A.U.S.  
 Fisch, R. J., LeMars (Denver, Colo.) ..... Capt., A.U.S.  
 Foss, R. H., Remsen (Homestead, Fla.) ..... Capt., A.U.S.  
 Wolfson, Harold, Kingsley (APO San Francisco, Cal.) ..... Lt. Col., A.U.S.



**Pocahontas County**

Blair, F. L., Jr., Fonda.....Lt., U.S.N.R.  
Herrick, T. G., Gilmore City (APO 218, New York,  
N. Y.).....Capt., A.U.S.  
Larson, J. B., Laurens (APO 720, San Francisco,  
Cal.).....Capt., A.U.S.  
Patterson, A. W., Fonda (Des Moines, Iowa).....Capt., A.U.S.

**Polk County**

Angell, C. A., Des Moines (APO 403, New York,  
N. Y.).....Capt., A.U.S.  
Barner, J. L., Des Moines (Atlanta, Ga.).....Major, A.U.S.  
Bates, M. T., Des Moines (Inyokern, Cal.).....Lt. Comdr., U.S.N.R.  
Bender, H. R., Des Moines (Carlisle Barracks,  
Penn.).....1st Lt., A.U.S.  
Bond, T. A., Des Moines (Oakland, Cal.).....Lt. Comdr., U.S.N.R.  
Bone, H. C., Des Moines (Arlington, Cal.).....Major, A.U.S.  
Bruner, J. M., Des Moines (El Paso, Texas).....Major, A.U.S.  
Bruns, P. D., Des Moines (Carlisle Barracks,  
Penn.).....1st Lt., A.U.S.  
Caldwell, J. W., Des Moines.....Squad Leader, R.C.A.F.  
Chambers, J. W., Des Moines (APO 758, New York,  
N. Y.).....Capt., A.U.S.  
Chase, W. B., Jr., Des Moines (Bremerton,  
Wash.).....Lt. Comdr., U.S.N.R.  
Connell, J. R., Des Moines.....Major, A.U.S.  
Corn, H. H., Des Moines (APO 9281, San Fran-  
cisco, Cal.).....Capt., A.U.S.  
Coughlan, D. W., Des Moines (APO 1052, San  
Francisco, Cal.).....Major, A.U.S.  
Crowley, D. F., Jr., Des Moines (Manchester,  
N. H.).....Major, A.U.S.  
Crowley, F. A., Des Moines (APO 783, New York,  
N. Y.).....Capt., A.U.S.  
Decker, H. G., Des Moines.....Comdr., U.S.N.R.  
Downing, A. H., Des Moines (Clinton, Iowa).....Capt., A.U.S.  
Elliott, O. A., Des Moines.....Capt., A.U.S.  
Ellis, H. G., Des Moines.....Capt., A.U.S.  
Ervin, L. J., Des Moines (Victoria, Texas).....Lt. Col., A.U.S.  
Fleck, W. L., Des Moines (Ft. Howard, Md.).....Lt. Col., A.U.S.  
Fried, David, Des Moines (Carlisle Barracks,  
Penn.).....1st Lt., A.U.S.  
Fracasse, John, Des Moines.....1st Lt., A.U.S.  
Gerchek, E. W., Des Moines.....Capt., A.U.S.  
Glomset, D. A., Des Moines (Clinton, Iowa).....Capt., A.U.S.  
Goldberg, Louie, Des Moines.....Capt., A.U.S.  
Gordon, A. M., Des Moines (APO 367, New York,  
N. Y.).....Capt., A.U.S.  
Graeber, F. O., Des Moines (Fleet PO, San Francisco,  
Cal.).....Lt., U.S.N.R.  
Greek, L. M., Des Moines.....Lt., U.S.N.R.  
Gurau, H. D., Des Moines (Austin, Texas).....Capt., A.U.S.  
Harris, D. D., Des Moines (Gulfport, Miss.).....Lt. Comdr., U.S.N.R.  
Harris, H. L., Des Moines (Salina, Kan.).....1st Lt., A.U.S.  
Hess, John, Jr., Des Moines.....1st Lt., A.U.S.  
Kast, D. H., Des Moines (Fort Stevens, Ore.).....Capt., A.U.S.  
Kelley, E. J., Des Moines (Columbus, Ohio).....Comdr., U.S.N.R.  
Kirch, W. A., Des Moines (Astoria, Ore.).....Lt. Comdr., U.S.N.R.  
Landis, S. N., Des Moines (West Palm Beach,  
Fla.).....1st Lt., A.U.S.  
La Tona, Salvatore, Des Moines.....1st Lt., A.U.S.  
Lederman, James, Des Moines.....1st Lt., R.C.A.  
Lehman, E. W., Des Moines (APO 70,  
San Francisco, Cal.).....Major, A.U.S.  
Losh, C. W., Jr., Des Moines.....Capt., A.U.S.  
Maloney, P. J., Des Moines (Fort Lewis, Wash.).....1st Lt., A.U.S.  
Marquis, G. S., Des Moines (Brooklyn, N. Y.).....Comdr., U.S.N.R.  
Martin, L. E., Des Moines (Helena, Ark.).....1st Lt., A.U.S.  
Matheson, J. H., Des Moines (Fleet PO, San Francisco,  
Cal.).....Lt. Comdr., U.S.N.R.  
Mauritz, E. L., Des Moines.....Capt., A.U.S.  
McCoy, H. J., Des Moines.....Comdr., U.S.N.R.  
McDonald, D. J., Des Moines.....Major, A.U.S.  
McNamee, J. H., Des Moines.....Comdr., U.S.N.R.  
Mencher, E. W., Des Moines.....1st Lt., A.U.S.  
Merkel, B. M., Des Moines (Denver, Colo.).....Lt. Col., A.U.S.  
Montgomery, S. A., Des Moines (Carlisle Barracks,  
Pa.).....Capt., A.U.S.

†Morden, R. P., Des Moines (APO 635, New York,  
N. Y.).....Capt., A.U.S.  
Mumma, C. S., Des Moines (Los Angeles, Cal.).....Major, A.U.S.  
Murphy, J. H., Des Moines (Fleet PO, San Fran-  
cisco, Cal.).....Lt., U.S.N.R.  
Nelson, A. L., Des Moines (Washington, D. C.).....Major, A.U.S.  
Noun, L. J., Des Moines (Newport, R. I.).....Lt. Comdr., U.S.N.R.  
Nourse, M. H., Des Moines (Fleet PO, New York,  
N. Y.).....Lt., U.S.N.  
Overton, L. M., Des Moines (Fleet PO, San Francisco,  
Cal.).....Lt. Comdr., U.S.N.R.  
Patton, B. W., Des Moines (Camp Robinson,  
Ark.).....1st Lt., A.U.S.  
Peisen, C. J., Des Moines (APO 887, New York,  
N. Y.).....Major, A.U.S.  
Phillips, A. B., Des Moines.....Lt., U.S.N.R.  
Porter, R. J., Des Moines.....Capt., A.U.S.  
Priestley, J. B., Des Moines (Clinton, Iowa).....Lt. Col., A.U.S.  
Robinson, V. C., Des Moines.....Major, A.U.S.  
Rotkow, M. J., Des Moines.....Capt., A.U.S.  
Schlaser, V. L., Des Moines (Hutchinson, Kan.).....Lt., U.S.N.  
Shepherd, L. K., Des Moines.....Major, A.U.S.  
Shiffer, H. K., Des Moines.....Capt., A.U.S.  
Singer, P. L., Des Moines (Camp Grant, Ill.).....1st Lt., A.U.S.  
Skultety, J. A., Des Moines (Fleet PO, San Fran-  
cisco, Cal.).....P. A. Surg., U.S.P.H.S.

Smith, R. T., Des Moines (APO 719, San Francisco,  
Cal.).....Capt., A.U.S.  
\*Snodgrass, R. W., Des Moines (APO 9528, New York,  
N. Y.).....Capt., A.U.S.  
Sorensen, R. M., Des Moines (Topeka, Kan.).....Major, U.S.P.H.S.  
Springer, F. A., Des Moines.....Comdr., U.S.N.R.  
Stearns, A. B., Des Moines (Denver, Colo.).....Major, A.U.S.  
Stitt, P. L., Des Moines (Seattle, Wash.).....Lt. (jg), U.S.N.R.  
Toubes, A. A., Des Moines (APO 635, New York,  
N. Y.).....Capt., A.U.S.  
Turner, H. V., Des Moines (San Antonio, Texas).....Capt., A.U.S.  
Updegraff, Thomas, Des Moines (APO San Fran-  
cisco, Cal.).....Capt., A.U.S.  
Van Hale, L. A., Des Moines (Des Moines, Iowa) Major, A.U.S.  
Wagner, E. C., Des Moines (APO 1009, San Fran-  
cisco, Cal.).....Capt., A.U.S.  
Wirtz, D. C., Des Moines.....Lt. Comdr., U.S.N.R.

**Pottawattamie County**

Dean, A. M., Council Bluffs (Fleet PO, San Francisco,  
Cal.).....Comdr., U.S.N.R.  
Edwards, C. V., Council Bluffs (Pensacola, Fla.).....Lt. Comdr., U.S.N.R.  
Floersch, E. B., Council Bluffs (Fleet PO, San Fran-  
cisco, Cal.).....Lt. Comdr., U.S.N.R.  
Hennessy, J. D., Council Bluffs (Clinton,  
Okla.).....Lt. Comdr., U.S.N.R.  
Klok, G. J., Council Bluffs (Fleet PO, San Diego,  
Cal.).....Lt., U.S.N.R.  
Kurth, C. J., Council Bluffs (Camp Crowder, Mo.) Major, A.U.S.  
Martin, L. R., Council Bluffs (Auburn, Cal.).....Capt., A.U.S.  
Mathiasen, H. W., Neola (Alexandria, La.).....Capt., A.U.S.  
Mathiasen, J. W., Council Bluffs (Patterson Field,  
Ohio).....Capt., A.U.S.  
Rosenfeld, R. T., Council Bluffs (Staten Island,  
N. Y.).....Major, A.U.S.  
West, A. G., Council Bluffs (APO 230, New York,  
N. Y.).....Capt., A.U.S.  
Wieseler, R. J., Avoca (McChord Field, Wash.).....A.U.S.  
Wurl, O. A., Council Bluffs (APO 887, New York,  
N. Y.).....Lt. Col., A.U.S.

**Poweshiek County**

Somers, P. E., Grinnell (Denver, Colo.).....1st Lt., A.U.S.

**Ringgold County**

Seaman, C. L., Mount Ayer (Fort Smith, Ark.).....Major, A.U.S.

**Sac County**

Bassett, G. H., Sac City (Mobile, Ala.).....Lt. Comdr., U.S.N.R.  
Evans, W. I., Sac City (APO 9212, New York,  
N. Y.).....Capt., A.U.S.  
Klocksiem, R. G., Odebolt (Fleet PO, San Francisco,  
Cal.).....Lt. Comdr., U.S.N.R.  
Neu, H. N., Sac City.....Lt. Col., A.U.S.

**Scott County**

†Baker, R. W., Davenport (APO 511, New York,  
N. Y.).....Capt., A.U.S.  
Balzer, W. J., Davenport.....Capt., A.U.S.  
Boyer, U. S., Davenport (Rock Island, Ill.).....Lt. Col., A.U.S.  
Carey, E. T., Davenport (APO 928, San Francisco,  
Cal.).....1st Lt., A.U.S.  
Christiansen, C. C., Dixon (APO 961, San Fran-  
cisco, Cal.).....Capt., A.U.S.  
Coleman, Tom, Davenport (APO 230, New York,  
N. Y.).....Capt., A.U.S.  
Cummins, G. M., Jr., Davenport (Fort Custer,  
Mich.).....Capt., A.U.S.  
Decker, C. E., Davenport (APO 321, San Francisco,  
Cal.).....Major, A.U.S.  
Evans, H. J., Davenport (Daytona Beach, Fla.).....Capt., A.U.S.  
Gibson, P. E., Davenport (Palm Springs, Cal.).....Major, A.U.S.  
Gonne, Wm., Jr., Davenport (APO 91, New York,  
N. Y.).....Capt., A.U.S.  
Hurevitz, H. M., Davenport.....Major, A.U.S.  
Hurteau, Everett, Davenport (APO 647, New York,  
N. Y.).....Capt., A.U.S.  
Hurteau, W. W., Davenport (Camp Berkeley,  
Texas).....Major, A.U.S.  
Kimberly, L. W., Davenport (Oak Ridge, Tenn.).....Capt., A.U.S.  
Krakauer, Max, Davenport (APO 758, New York,  
N. Y.).....Capt., A.U.S.  
Kuhl, A. B., Jr., Davenport (Ft. Meade, Md.).....1st Lt., A.U.S.  
Neufeld, R. J., Davenport (APO 565, Unit I, San Francisco,  
Cal.).....Capt., A.U.S.  
Perkins, R. M., Davenport (APO 121B, New York,  
N. Y.).....Capt., A.U.S.  
Rendleman, Hugh, Davenport (Fleet PO, San  
Francisco, Cal.).....Lt. (jg), U.S.N.R.  
Sheeler, I. H., Davenport (APO 350, New York,  
N. Y.).....Capt., A.U.S.  
Sorenson, A. C., Davenport (Oakland, Cal.).....Comdr., U.S.N.R.  
Weinberg, H. B., Davenport (APO 72, San Francisco,  
Cal.).....Major, A.U.S.  
Zukerman, C. M., Bettendorf.....Capt., A.U.S.

**Shelby County**

Bisgard, C. V., Harlan (Fleet PO, San Francisco,  
Cal.).....Comdr., U.S.N.R.  
Griffith, W. O., Shelby (APO 9490, New York,  
N. Y.).....Capt., A.U.S.  
McGowan, J. P., Harlan (La Jolla, Cal.).....Lt. Comdr., U.S.N.R.

**Sioux County**

Gleysteen, R. R., Alton (Oceanside, Cal.).....Comdr., U.S.N.  
Oelrich, C. D., Sioux Center (Buckley Field, Colo.)..Capt., A.U.S.

**Story County**

Lekwa, A. H., Story City (Fleet PO, San Francisco,  
Cal.) .....Comdr., U.S.N.R.  
McFarland, G. E., Jr., Ames (Fleet PO, San Francisco,  
Cal.) .....Lt., U.S.N.R.

**Tama County**

Bezman, H. S., Traer (APO 902, San Francisco,  
Cal.) .....Capt., A.U.S.  
Dobias, S. G., Chelsea (APO 86, San Francisco,  
Cal.) .....Major, A.U.S.  
Havlik, A. J., Tama (Fleet PO, San Francisco, Cal.)..Lt., U.S.N.R.  
Standefor, J. M., Tama (Des Moines, Iowa).....Lt., U.S.N.R.

**Union County**

Paragas, M. R., Creston (APO 442, San Francisco,  
Cal.) .....Capt., A.U.S.

**Wapello County**

Brentan, Emanuel, Ottumwa (Camp Carson, Colo.)..Capt., A.U.S.  
Gillfillan, C. D. N., Eldon (Battle Creek, Mich.)....Capt., A.U.S.  
Howell, H. P., Ottumwa (San Rafael, Cal.).....Major, A.U.S.  
Moore, G. C., Ottumwa (APO 814, New York,  
N. Y.) .....Capt., A.U.S.  
Prewitt, L. H., Ottumwa (San Antonio, Texas).....Major, A.U.S.  
Selman, R. J., Ottumwa (El Paso, Texas).....Col., A.U.S.  
Struble, G. C., Ottumwa (Cleveland, Ohio).....Lt. Col., A.U.S.  
Whitehouse, W. N., Ottumwa (Fleet PO, San Fran-  
cisco, Cal.).....Comdr., U.S.N.R.

**Warren County**

Hoffman, G. R., Lacona (Camp San Louis Obispo,  
Cal.) .....Capt., A.U.S.

**Washington County**

Boice, C. L., Washington (Arlington, Wash.)..Lt. Comdr., U.S.N.  
Droz, A. K., Washington (Fleet PO, San Francisco,  
Cal.) .....Comdr., U.S.N.R.  
Mast, T. M., Washington (Great Lakes, Illinois)  
.....Lt. Comdr., U.S.N.R.  
Miller, J. R., Wellman (APO New York, N. Y.)....1st. Lt., A.U.S.  
Stuttsman, R. E., Washington (Patuxent River,  
Md.) .....Lt., U.S.N.R.

**Webster County**

Burch, E. S., Dayton (Camp Crowder, Mo.).....Capt., A.U.S.  
Burleson, M. W., Fort Dodge (Pasadena, Cal.).....Capt., A.U.S.  
Coughlan, C. H., Fort Dodge (Camp Carson, Colo.)..Major, A.U.S.  
Dawson, E. B., Fort Dodge (Fleet PO, San Francisco,  
Cal.) .....Lt. Comdr., U.S.N.R.  
Glesne, O. N., Ft. Dodge (New River, N. C.)..Lt. Comdr., U.S.N.R.  
Joyner, N. M., Fort Dodge (Fargo, N. Dak.).....A.U.S.  
Kluever, H. C., Fort Dodge (St. Louis, Mo.).....Lt. Comdr., U.S.N.R.  
Pederson, Thomas, Fort Dodge .....Capt., A.U.S.  
Shrader, J. C., Fort Dodge (Camp Carson, Colo.)..Lt. Col., A.U.S.  
†Thatcher, O. D., Fort Dodge (APO 634, New York,  
N. Y.) .....Capt., A.U.S.  
Van Patten, E. M., Ft. Dodge (Colorado Springs,  
Colo.) .....Capt., A.U.S.

**Winneshiek County**

Hospodarsky, L. J., Ridgeway (APO 638, New York,  
N. Y.) .....Lt. Col., A.U.S.

**Woodbury County**

Bettler, P. L., Sioux City (APO 235, San Francisco,  
Cal.) .....Lt. Col., A.U.S.  
Boe, Henry, Sioux City (Fort Snelling, Minn.).....Capt., A.U.S.  
Burroughs, H. H., Sioux City (Portsmouth, Va.)...Lt., U.S.N.R.  
Cowan, J. A., Sioux City (Oklahoma City,  
Okla.) .....Major, U.S.P.H.S.  
Crowder, R. E., Sioux City (Kansas City,  
Mo.) .....Lt. Comdr., U.S.N.R.  
Dimsdale, L. J., Sioux City (Clinton, Iowa).....Capt., A.U.S.  
Frank, L. J., Sioux City (Fleet PO, San Francisco,  
Cal.) .....Comdr., U.S.N.R.  
Graham, J. W., Sioux City (Pensacola, Fla.) Lt. Comdr., U.S.N.R.  
Grossman, M. D., Sioux City (APO 33, San Francisco,  
Cal.) .....Capt., A.U.S.  
Harris, D. M., Sioux City .....Capt., A.U.S.  
Heffernan, C. E., Sioux City (APO 336, San  
Francisco, Cal.) .....Capt., A.U.S.  
Hicks, W. K., Sioux City (Spokane, Wash.).....Major, A.U.S.  
Honke, E. M., Sioux City (Modesto, Cal.).....Major, A.U.S.  
Knott, P. D., Sioux City (Camp Crowder, Mo.).....Capt., A.U.S.  
Knott, R. C., Sioux City (APO 403, New York,  
N. Y.) .....Major, A.U.S.  
Kristen, W. M., Sioux City (Springfield, Mo.)...Lt. Col., A.U.S.  
Lande, J. N., Sioux City (APO 63, New York, N. Y.) Major, A.U.S.  
Martin, R. F., Sioux City (APO 403, New York,  
N. Y.) .....Capt., A.U.S.  
Mattice, L. H., Danbury .....Capt., A.U.S.  
Reeder, J. E., Jr., Sioux City (Camp Carson, Colo.)..Major, A.U.S.  
Ryan, M. J., Sioux City (Topeka, Kan.).....Major, A.U.S.  
Schwartz, J. W., Sioux City (APO 816, New York,  
N. Y.) .....Lt. Col., A.U.S.

Simonsen, Marie N., Sioux City (Philadelphia, Pa.)..Lt., U.S.N.R.  
Tracy, J. S., Sioux City (Camp Polk, La.).....Major, A.U.S.

**Wright County**

Aagesen, C. A., Dows (APO 383, New York, N. Y.).....Capt., A.U.S.  
Bird, R. G., Clarion (Asbury Park, N. J.)..Lt. Comdr., U.S.N.R.  
Doles, E. A., Clarion (Spokane, Wash.).....Capt., A.U.S.  
Missildine, W. H., Eagle Grove.....Capt., A.U.S.

(\*) Reported missing in action.  
(†) Reported deceased in service.  
(‡) Reported prisoner of war.

**HOUSE OF DELEGATES MEETING**

(Continued from page 18)

ice and Public Relations held a two day meeting prior to the meeting of the House and drew up a resolution for such a national plan. This was presented to the House along with many others, and the final recommendation was that the whole matter be referred back to the Board of Trustees and the Council and they were instructed to set up such a plan immediately, with emphasis upon a nationwide organization of locally administered prepayment medical plans sponsored by medical societies. This was unanimously approved by the House with no dissent or question.

Disapproval of President Truman's proposed health program and of the Pepper Bill was unanimous.

The following officers were elected: President-elect, Harrison H. Shoulders of Tennessee; vice president, W. R. Molony of California; secretary, Olin West; treasurer, J. J. Moore of Chicago; speaker of the house, R. W. Fouts of Nebraska; vice speaker, F. F. Borzell of Pennsylvania; trustees, John H. Fitzgibbon of Oregon, James R. Miller of Connecticut, and Dwight H. Murray of California. Council members chosen were: Judicial Council, L. A. Buie of Minnesota; Scientific Assembly, H. R. Vietz of Massachusetts; Medical Education and Hospitals, H. G. Weiskotten of New York; and Medical Service and Public Relations, A. W. Adson of Minnesota and R. L. Zech of Washington.

The meeting place is selected three years in advance, and St. Louis was chosen for 1948. The 1946 meeting will be held in San Francisco July 1 to 5.

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# WOMAN'S AUXILIARY NEWS

MRS. KEITH M. CHAPLER, *Chairman of Press and Publicity Committee, Dexter, Iowa*

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## AN OPERATION IN THE 1840's

"The old surgical room in the Massachusetts General Hospital, of Boston, where W. T. G. Morton gave the first public demonstration of ether anesthesia, is located in the dome of the building. Returning from a visit to this room, a friend of mine said, wide-eyed with horror: 'And do you know why it was located up there in the dome of the building? It was so the screams of the patients being operated on could not be heard so plainly by other patients. Think of it!'

"Let us turn now to a surgical operating room of the early eighteen-forties, shortly before the discovery of anesthesia. The account of an amputation which follows is quoted from *The New York Herald* of July 21, 1841. It is a true and vivid picture:

"The case was one of white swelling, for which the thigh was to be amputated.

"The patient was a youth of about fifteen, pale, thin, but calm and firm. One professor felt for the femoral artery, had the leg held up for a few moments to insure the saving of blood, the compress part of the tourniquet was placed upon the artery and the leg held up by an assistant.

"The white swelling was fearful. A little wine was given the lad; he was pale but resolute; his father supported his head and left hand.

"A second professor took the long, glittering knife, felt for the bone, thrust in the knife carefully but rapidly. The boy screamed terribly; the tears went down the father's cheeks. The first cut from the inside was completed, and the bloody blade of the knife issued from the quivering wound, the blood flowed by the pint, the sight was sickening; the screams were terrific; the operator was calm.

"Again the knife was thrust under the bone, the terrific screaming was renewed; one or two picked up their hats to leave; scream upon scream and again the bloody blade of the knife issued from the wound and was laid aside. The flesh quivered and the boy cried agonizingly.

"The flesh was thrust back with a small piece of wet linen; the divided ends of the quivering muscles were stopped from blood with a sponge; the saw glistened in the hands of the operator, the father turned pale as death; the boy's eyes fastened

on the instrument with glazed agony; grate—crush—once, twice, and the useless limb from the toes to the center of the thigh was quickly dropped into the tub under the table . . .'

"And then came Wells and Morton, and a chemist named Jackson. And they brought us anesthesia."

The foregoing excerpt is from *MAN AGAINST PAIN*, Dr. Howard Riley Raper's fine book on the history of anesthesia which we seriously recommend lest we forget our many blessings in these days of medical advancement.

## PUBLIC HEALTH NURSES

October 22, 1945

"The United States now has a total of 20,818 public health nurses, or one public health nurse for every 8,300 people, according to an article to be published in *Public Health Nursing Magazine* by the National Organization for Public Health Nursing, and based on statistics supplied by the U. S. Public Health Service.

"The distribution of public health nurses according to population varies in different sections of the country, however, as it ranges from one public health nurse to every 2,900 people in an eastern state to one for 18,300 in a southwestern state, the article further reveals. The minimum standard accepted by health authorities is one public health nurse to every 2,000 to 5,000 population.

"Since 1941 the number of nurses employed by rural health departments has increased 21.5 per cent, and the number in urban health departments has increased by 14.3 per cent. The number of nurses employed for work in schools by boards of education also increased, but the number of nurses in non-official urban health agencies—usually visiting nurse associations—decreased 21.9 per cent. The total number of public health nurses for the country as a whole remained static during the war period, although more than 3,000 public health nurses are serving with the armed forces.

"Nine hundred and nine counties have no rural public health nursing service. In some of these counties budgets make such service possible but public health nurses are not available.

"Of the 20,818 public health nurses in the United States, Hawaii, Alaska, Puerto Rico and the Virgin Islands, 869 are employed by state health departments and other state agencies, 4,938 by rural official health agencies, 5,700 by urban health departments and other official health agencies, 4,321 by local boards of education, 4,742 by local non-official agencies, such as visiting nurse associations, 248 by universities and national agencies."—National Organization for Public Health Nursing.

The span of human life is about the same for all the people of the earth, and it probably hasn't changed much since earliest recorded time. The span, which means the upper limit of life for those who survive, is about one hundred years, and not very many people make it. The figure that has changed greatly down the years and still varies widely from country to country across the world today is the average length of human life. Reflecting environmental conditions of all kinds, this ranges from a high of 68.45 years among the females of New Zealand to a probable low of 26.56 in India.

In the United States, the average length of life, or expectation of life at birth, as it is called by technical experts like Dr. Louis I. Dublin, has increased from 35 years in George Washington's time to around 66 years (63.65) for males and 68.61 for females) today. Everybody agrees that the improvement is generally attributable to better housing, food, education, working conditions and medical care. The thing that has the statisticians worried now is the fact that while the average length of life has been increasing so robustly, the expectation of life after age 40 has increased only slightly, and birth rates have actually declined in most of the western nations. This foreshadows a fall in population for these countries, the experts hint, with consequent loss of influence in world affairs. "Even we in the United States are at best promised an approximately stationary population from about 1980 forward," Dr. Dublin declares soberly. He brightens visibly, however, in predicting what may happen to some of the aging citizens of these failing nations: "Experimentation gives hints of a life longer in years and richer in vitality through proper nutrition and recent developments to correct the chemical upsets the aging process seems to induce in the body."—R. M. CUNNINGHAM, JR.

*Hygeia*, August, 1945.

A microscope that makes a mosquito's windpipe look as big as a baseball bat has recently been installed in the National Cancer Institute of Bethesda, Maryland, a branch of the United States Public Health Service. The new instrument operates on the electronic principle, weighs over a ton, cost \$13,000 to build and can magnify an object 75,000 times, thus making it possible for scientists to peer into submicroscopic worlds heretofore known only by sol-

emn guesswork. Among other uses, the microscope will aid direct comparisons of diseased and healthy tissues in cancer research. Moreover, it will show for the first time how disease-fighting organisms in the blood attack disease-producing viruses—an important contribution to determining the effectiveness of various methods of treating diseases like the common cold, influenza and infantile paralysis.—R. M. CUNNINGHAM, JR.

*Hygeia*, August, 1945.

#### PENICILLIN TO CHINA\*

Penicillin, newest wonder drug of science, will shortly become available in quantity for treatment of casualties in China, according to the National War Fund. During recent weeks several consignments of small glass ampules containing penicillium spores, a substance that looks like musty green clay, have been flown into China and are now in process of manufacture into penicillin, the report stated. The ampules, wrapped like gems in surgical cotton, are each about an inch and a half in length but contain sufficient spores to start an unlimited quantity of penicillium mold, which, when mixed with the proper type of culture, produces penicillin, it was explained.

\**Hygeia*, October, 1945.

#### HOMEFRONT DOCTOR\*

No martial music measures out his tread,  
Nor battle's thunder makes his heart beat high;  
Quietly he goes from bed to bed  
With seeming leisure. Here to fortify  
With new encouragement the wavering hope  
Of one who walks with suffering down the years—  
There to lead to knowledge those who grope,  
Bewildered by their superstitious fears.  
His skilful hands will level out some pain's  
Fierce mountain peak; his own fatigue ignored  
Before the joyous work of loosing chains  
That bound a child, and see his health restored.  
Soldier of healing! We within your ranks—  
Though one in ten—turn back to give you thanks.  
—ISABEL M. WOOD

\**Hygeia*, July, 1945.

#### SPEAKERS BUREAU RADIO SCHEDULE

WOI—Wednesdays at 2:45 p. m.

WSUI—Thursdays at 9:30 a. m.

January 2- 3	Present Trends in the Field of Eye, Ear, Nose and Throat Oral L. Thorburn, M.D.
January 9-10	Present Trends in Surgery Edward H. Sibley, M.D.
January 16-17	Present Trends in Medicine George B. Crow, M.D.
January 23-24	Present Trends in Orthopedics Theodore J. Greteman, M.D.
January 30-31	Present Trends in Public Health Edmund G. Zimmerer, M.D.



# HISTORY OF MEDICINE IN IOWA

*Edited by the Historical Committee*

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## William Jepson, M. D.

1863-1945

### A Tribute

In the death of Dr. William Jepson of Sioux City on Friday, November 30, a notably distinguished career was brought to a close and the Iowa profession lost one of its really great leaders. A master in his chosen specialty of surgery, and an inspiring teacher, Dr. Jepson served the profession long and faithfully, and it is difficult to appraise the full measure of his contribution to the medical and surgical knowledge of his period.

Dr. Jepson was born in Aarhus, Denmark, June 29, 1863, coming with his parents at the age of three years to Wayne County, Iowa. His early education was obtained in the public schools of Seymour, Iowa, followed by an advanced course at the Northwest (later Morningside) College in Sioux City. Having determined upon the study of medicine, he entered the Medical Department of the State University of Iowa at Iowa City, and received the degree of Doctor of Medicine in 1886. Soon after graduation he began practice in Oakland, Nebraska, but after six months moved to Sioux City where he remained the rest of his life. He early gained prominence as a surgeon and was active in establishing St. Joseph Hospital. The urge for further training took him to Philadelphia in 1890 where he matriculated as a senior student in two medical schools, Jefferson Medical College and the University of Pennsylvania. He had the unique experience of being granted a diploma of Doctor of Medicine in June 1891 from both institutions. His classmate and roommate at Jefferson Medical College was Dr. Merritte W. Ireland, later Surgeon General of the U. S. Army. Upon his return to Sioux City he was appointed

Professor of Surgery at the Sioux City College of Medicine, which position he held until 1901. In 1893 an event occurred which distinctly extended his influence and reputation as a surgeon. The cyclone at Pomeroy, Iowa, in the late summer brought death and destruction to that town, and 160 persons were injured. The many physicians who were hurried to the scene chose Dr. Jepson as chief surgeon, which was a high recognition of his organizing and surgical ability, particularly since he was then only thirty years of age. A grateful community expressed its appreciation in the form of a beautiful gold watch which he always regarded as one of his prized possessions.

With his avidity for knowledge, Dr. Jepson again followed the urge in 1897 to go to Edinburgh for a six months' course. During this time he successfully passed the Triple Qualification Board of Scotland, which granted him the degrees of Licentiate Royal College of Physicians, Member Royal College of Surgeons of Edinburgh, and Licentiate Royal Faculty of Glasgow, and also placed him on the British Registry for practice. While in Edinburgh he attended the twelfth International Medical Congress at Moscow,



DR. WILLIAM JEPSON

Russia.

In 1902 he was elected to the Chair of Surgery in the College of Medicine, State University of Iowa. This service offered the opportunity for the exposition of his unusual talents as a stimulating teacher, surgical diagnostician, and skilful operator. It was remarkable the volume of work he accomplished in the two days spent each week in Iowa City; he usually averaged twenty to thirty new patients. He

then returned to Sioux City for the remaining days of the week for his private practice. During this period of service at the University, 1902-1913, he made his valuable contributions to the surgery of the spleen, liver, gastro-intestinal tract, mammary and thyroid glands. Strong inducements were offered for him to consider a full-time professorship of surgery, but in 1913 he decided to return to his private surgical practice in Sioux City.

For a number of years Dr. Jepson was a member of the medical faculty of the University of South Dakota, during which time he completed the requirements for the degree of Bachelor of Science. He was elected to membership in two honor societies, Sigma Xi (scientific) and Alpha Omega Alpha (medical), as well as being a member of Nu Sigma Nu medical fraternity. He was a Fellow of the American College of Surgeons and the International College of Surgeons. At the time of his death he was the oldest living member of the Western Surgical Association. He was also a Diplomate (Founders Group) of the American Board of Surgery. Through his entire professional career he was a leading exponent of medical society organization. He served as president of the Iowa State Medical Society from 1905 to 1906, and at his death was the oldest living past president.

Dr. Jepson had a long record of distinguished military service, having been a surgeon of the 56th Regiment of the Iowa National Guard from 1907 to 1916, with the rank of Major. During 1916 and 1917 he served as surgeon of the Second Iowa Regiment on the Mexican border, and during World War I was chief surgeon at the Base Hospital, Camp Bowie, Texas.

In summarizing the life of Dr. Jepson, it is fitting to state that the progress of medical science in Iowa during the past half century parallels the story of his interesting and productive career. His success in the practice of surgery was largely due to his fundamental knowledge of anatomy, physiology, and pathology in their application to surgical diagnosis, combined with daring and skilful operative technic, yet his happiest moments were when he could lead a patient back to health without the need of surgery. The writer is conscious of being alive today by reason of his rare surgical judgment and skill.

Dr. Jepson, was an intellectual, possessed of a powerful mind, persistent and keen in its search for the truth. In many respects he was a rather amazing individual and frequently surprised his intimate friends with his familiarity and knowledge of subjects foreign to his professional work. While modestly disclaiming any unusual knowledge, he confessed with eagerness and enthusiasm the wide range of his interest in men and events over the world.

Many former students, faculty colleagues and medical friends, were privileged to have a happy visit with him in Iowa City last September at the seventy-fifth anniversary of the founding of the University Medical School.

His last years were attended by much physical dis-

comfort and suffering resulting from peripheral endarteritis, but he bore it like a true soldier. He is survived by two sons and two daughters; one of the sons, Dr. Roscoe Jepson, is a practicing surgeon in Coronado, California.

William Jepson had a full life, rich in beneficent service for human welfare, and it has been one of life's privileges to have known him.—Walter L. Biering, M.D.

## SCHOOL HEALTH POLICIES

The National Committee on School Health Policies of the National Conference for Cooperation in Health Education has formulated a guide for all those concerned with health in schools. This revised, second edition, entitled "Suggested School Health Policies," has been published as a 48-page brochure by the Health Education Council, 10 Downing street, New York City, and may be obtained for twenty-five cents a copy through the Teachers College Bureau of Publications, Columbia University, New York City.

The National Committee on School Health Policies is comprised of representatives of every significant line of thought contributory to health problems in education. Provisions for healthful school living, health and safety instruction, services for health protection and improvement, health aspects of physical education, education and care of the handicapped, and qualifications of school health personnel are set forth in this publication. Certain recommendations suggested include the organization of a school health council, the raising of standards of inspection for safety and sanitation, improvement in the quality of health and safety instruction, and wider programs of health counseling. Definite programs are offered for the control of communicable diseases and avoidable accidents, recommendations for handicapped children, and participation in programs of parent and community health education.

This brochure is worthy of consideration by all Iowa physicians actively engaged or interested in school health policies. This state has always been outstanding in the cooperation of physicians with school health programs, but undoubtedly there are numerous suggestions which would prove of definite value in any community or state.

## MEDICAL HISTORY OF WAPELLO COUNTY

by

Clyde A. Henry, M.D., Farson

The next installment, which will pertain to the present membership of the Wapello County Medical Society, will appear in the February issue of the Journal.



# THE JOURNAL BOOK SHELF

## BOOKS RECEIVED

**THE OSSEOUS SYSTEM, A Handbook of Roentgen Diagnosis**—By Vincent W. Archer, M.D., Professor of Roentgenology, University of Virginia Department of Medicine. The Year Book Publishers, Inc., Chicago, 1945. Price, \$5.50.

**SYNOPSIS OF GENITOURINARY DISEASES**—By Austin I. Dodson, M.D., Professor of Genitourinary Surgery, Medical College of Virginia; Genitourinary Surgeon to the Hospital Division, Medical College of Virginia; Genitourinary Surgeon to Crippled Children's Hospital; Urologist to St. Elizabeth's Hospital; Urologist to St. Luke's Hospital and McGuire Clinic. Fourth edition. The C. V. Mosby Company, St. Louis, 1945. Price, \$3.50.

**DISEASES OF THE BREAST**—By Charles F. Geschickter, M.D., Lt. Comdr., M.C., U.S.N.R., Director of the Francis P. Garvan Cancer Research Laboratory, Pathologist, St. Agnes Hospital, Baltimore; with Special Section on Treatment in Collaboration with MURRAY M. COPELAND, M.D., Instructor in Surgery, Johns Hopkins Medical School, Visiting Surgeon and Assistant Oncologist, University Hospital, University of Maryland Medical School, Visiting Oncologist, Baltimore City Hospital. Second edition. J. B. Lippincott Company, Philadelphia, 1945. Price, \$12.00.

**THE 1944 YEAR BOOK OF INDUSTRIAL AND ORTHOPEDIC SURGERY**—Edited by Charles F. Painter, M.D., Orthopedic Surgeon to the Massachusetts Women's Hospital and Beth Israel Hospital, Boston. The Year Book Publishers, Chicago, 1945. Price, \$3.00.

**PHYSICAL DIAGNOSIS**—By Ralph H. Major, M.D., Professor of Medicine, The University of Kansas, Kansas City, Kansas. Third edition, revised. W. B. Saunders Company, Philadelphia, 1945. Price, \$5.00.

**Mitchell-Nelson TEXTBOOK OF PEDIATRICS**—Edited by Waldo E. Nelson, M.D., Professor of Pediatrics, Temple University School of Medicine. With the collaboration of forty-nine contributors. Fourth edition, revised. W. B. Saunders Company, Philadelphia, 1945. Price, \$10.00.

**HEMATOLOGY, For Students and Practitioners**—By Willis M. Fowler, M.D., Professor of Internal Medicine, University of Iowa, Iowa City. With a chapter by ELMER L. DEGOWIN, M.D., Assistant Professor of Internal Medicine, University of Iowa, Iowa City. Paul B. Hoeber, Inc., New York, 1945. Price, \$8.00.

**CLINICAL PARASITOLOGY**—By Charles Franklin Craig, M.D., Col., A.U.S. (Retired), Formerly Director, Army Medical School, and Assistant Commandant, Army Medical Center, Washington, D. C., Emeritus Professor of Tropical Medicine in the Tulane University of Louisiana, New Orleans; and ERNEST CARROLL FAUST, Ph.D., Professor of Parasitology in the Department of Tropical Medicine, Tulane University of Louisiana, New Orleans, Consultant to the Secretary of War, Army Epidemiologic Board on Epidemic and Tropical Diseases, Consultant U. S. Public Health Service, Honorary Consultant, Army Medical Library. Fourth edition, thoroughly revised. Lea & Febiger, Philadelphia, 1945. Price, \$10.00.

**CLINICAL BIOCHEMISTRY**—By Abraham Cantarow, M.D., Professor of Physiological Chemistry, Jefferson Medical College, formerly Associate Professor of Medicine, Jefferson Medical College, and Assistant Physician, Jefferson Hospital; and MAX TRUMPER, Ph.D., Lt. Comdr., H(S), U.S.N.R., Naval Medical Research Institute, National Naval Medical Center, Bethesda, Md., formerly in charge of the Laboratories of Biochemistry of the Jefferson Medical College and Hospital. Third edition, revised. W. B. Saunders Company, Philadelphia, 1945. Price, \$6.50.

## BOOK REVIEWS

### NEW AND NONOFFICIAL REMEDIES, 1945

Containing descriptions of the articles which stand accepted by the Council on Pharmacy and Chemistry of the American Medical Association on January 1, 1945. American Medical Association, Chicago, 1945. Price, \$1.50.

Each year a revised list of the articles which stand accepted by the Council on Pharmacy and Chemistry of the American Medical Association as of January first is published in book form. The book contains the descriptions of acceptable proprietary substances and their preparations, proprietary mixtures if they have originality or other important qualities, important nonproprietary nonofficial articles, simple pharmaceutical preparations, and other articles which require retention in the book.

Some fifteen or twenty newly accepted preparations appear in the 1945 volume. A large number of preparations have been omitted, mainly brands of official preparations. The general statement concerning these pharmacopeial preparations has been retained for the information of physicians.

As stated in the preface, the entire book has been scanned to bring it up to date with the latest medical knowledge. It is noted that the section "Articles and Brands Accepted by the Council But Not Described in N.N.R.," a vestigial remnant of which appeared in the 1944 volume, has now entirely disappeared. This section appeared to have been a catch-all for brands of official articles, the acceptance of which the manufacturers desired for reasons of

prestige, and miscellaneous preparations which were not necessarily or importantly within the Council's scope and which did not require detailed description. Many of the official preparations have been transferred to the body of the book and the others deleted.

One is impressed by the large amount of medical information contained in this volume. Certainly no other compendium of comparable price contains so much.

### PATHOLOGY OF TROPICAL DISEASES

By J. E. Ash, Colonel, M.C., U.S.A., Director, Army Institute of Pathology, Army Medical Museum, and SOPHIE SPITZ, M.D., C.S., A.U.S., Pathologist, Army Institute of Pathology, Army Medical Museum. W. B. Saunders Company, Philadelphia, 1945. Price, \$8.00.

Profusely illustrated, carefully outlined, and exceedingly well written, this atlas is an outstanding contribution to the study of tropical diseases. Primarily, the book is a presentation of clear-cut descriptions, beautifully illustrated, of the pathology of tropical diseases; nevertheless, concise, clear-cut clinical descriptions are included. Etiology, epidemiology, clinical pathology, differential diagnosis and treatment are discussed.

The chief value of the work is well stated in the preface: "Much of the writing on tropical diseases has been concerned hitherto with etiology, epidemiology, clinical aspects, and treatment with only casual reference to the pathology, except in a few spe-

cific instances where commissions have deliberately made comprehensive studies. It is to fill this void in some measure and to present the viewpoint of the general pathologists that this atlas was undertaken."

Every physician interested in either tropical medicine or general pathology will want to possess this atlas. Many others, intrigued by the interesting and varied characteristics of the tropical diseases, will also find the volume extremely stimulating and instructive. Actually, of course, the subject of tropical diseases includes many conditions which occur in temperate and even in arctic climates; for example, rabies, lymphopathia venereum, granuloma inguinale, rickettsial diseases, Weil's disease, bacillary and amoebic dysentery, brucellosis, plague, systemic and cutaneous mycoses, and parasitic infestations. All of these conditions are discussed and illustrated.

R. F. B.

#### A MANUAL OF SURGICAL ANATOMY

Prepared under the auspices of the Committee on Surgery of the Division of Medical Sciences of the National Research Council, by Tom Jones and W. C. Shepard. W. B. Saunders Company, Philadelphia, 1945. Price, \$3.00.

This manual is noteworthy for its many favorable features. It is made up entirely of illustrations arranged in a sequence of related subjects and structures, including surgical approaches and incisions which follow the detailed study of the anatomy of the region concerned. The drawings themselves, many of which are in color, are extremely well done and thoroughly demonstrate individual structures and their relationship to neighboring structures. The labeling, for the most part, is accurate and complete, and the explanatory index, as its name implies, is convenient and very helpful.

While there is no better method of studying anatomy than at the dissection table, in the absence of facilities for the latter this book provides an excellent substitute. Even for a student who is first starting his dissections, this book provides an excellent guide; and in the field of surgery, particularly, it is a book well worth having.

J. W. A.

#### ESSENTIALS OF NEURO-PSYCHIATRY

A Textbook of Nervous and Mental Disorders

By David M. Olkon, M.D., Associate Professor of Psychiatry, College of Medicine, University of Illinois. Lea & Febiger, Philadelphia, 1945. Price, \$4.50.

The material in this book is presented in concise fashion. The author has tried to avoid an overload of psychiatric terminology in order to make the material attractive to the practitioner and student. Thus, many subjects are briefly covered. Important disorders such as involutional melancholia and the traumatic states are incompletely discussed. In the chapter on mental disturbances due to drugs, the

bromide and barbiturate preparations are not included. Many chapters are completely devoid of bibliography, while only a few chapters can be said to have adequate references. These omissions are emphasized by the fact that an entire chapter, with an extensive bibliography, is devoted to an explanation of the capillary system in health and disease. Exception might be taken to the discussion of Fröehlich's syndrome and Simmond's disease. A great deal of valuable space is utilized in the presentation of pictures of bodily types.

The chapter on military neuropsychiatry is timely and well done. In spite of its defects, this book will be found to contain a great deal of information of value to the practitioner and medical student.

A. L. S.

#### AMERICAN RED CROSS FIRST AID TEXTBOOK

Prepared by the American Red Cross for the instruction of first aid classes. Revised edition. The Blakiston Company, Philadelphia, 1945. Price: paper covers, \$0.60; cloth covers, \$1.00.

The revised edition of the American Red Cross First Aid Textbook has been prepared by an editorial committee of outstanding physicians and medical directors. Such controversial subjects as the treatment of shock, treatment of wounds, treatment of burns, artificial respiration, and the use of the tourniquet have been revised. There have been added certain features in the treatment of snake bite, care of eye injuries, the first aid treatment of fractures, the transportation of individuals with fractures, and the use of roller bandages. A new technic has been described for the treatment of hernia. The use of certain antidotes for poisoning has been changed. The revised edition, therefore, is as "educationally sound" as possible at the present time.

E. M. G.

#### THE EXTREMITIES

By Daniel P. Quiring, Ph.D., Head of the Anatomy Division, Cleveland Clinic Foundation, and Associate Professor of Biology, Western Reserve University; BEATRICE A. BOYLE, Artist, Cleveland Clinic Foundation; ERNA L. BOROUSH, M.A., Fellow, Anatomy Division, Cleveland Clinic Foundation; and BERNADINE LUFKIN, A.B., Former Secretary, Research Division, Cleveland Clinic Foundation. Lea & Febiger, Philadelphia, 1945. Price, \$2.75.

Here is an atlas dealing with individual muscles in each of the four extremities. Each muscle is described as to origin, insertion, function, nerve and blood supply. References are made to such standard textbooks as Gray and Cunningham.

This volume should prove especially helpful to the medical student. It is a convenient reference book for any physician and is recommended for its clarity.

E. M. G.



## SOCIETY PROCEEDINGS

### Black Hawk County

The regular monthly meeting of the Black Hawk County Medical Society was held in Waterloo at Black's Tea Room Tuesday, December 18, at 6:30 p. m. H. Vernon Madsen, M.D., of Waterloo spoke before the group on the Treatment of Tuberculosis.

S. A. Barrett, M.D., Secretary

### Butler County

Members of the Butler County Medical Society and Auxiliary met in Allison Monday evening with Dr. and Mrs. F. F. McKean. Election of officers was held by the doctors while their wives had a Christmas party with exchange of gifts. Officers elected to serve the Society during 1946 were Dr. Floyd O. Rolfs of Parkersburg, president; Dr. Bruce V. Andersen of Greene, vice president; and Dr. Frank F. McKean of Allison, secretary and treasurer. Preceding the business meeting the doctors and their wives enjoyed a venison dinner at an Allison cafe, the venison having been furnished by Dr. Carl F. Roder of Dumont.

### Cass County

The Cass County Medical Society held its annual meeting with election of officers Tuesday evening, December 11. Dr. Roscoe M. Needles was named president and Dr. Walter F. Giegerich, secretary. Both officers are of Atlantic.

### Clinton County

The Clinton County Medical Society held its annual election of officers at a meeting Wednesday evening, December 12, at the Elks Club in Clinton. The officers named for 1946 include Dr. Robert T. Lenaghan, president; Dr. Donald E. Hill, vice president; and Dr. Elsie R. Carrington, secretary and treasurer. All officers are of Clinton.

### Dubuque County

The annual meeting of the Dubuque County Medical Society was held in Dubuque at the Bunker Hill Golf Club Tuesday evening, December 11. Officers elected for the ensuing year are Dr. Albert J. Entringer, president; Dr. Arthur G. Plankers, first vice president; Dr. Donovan F. Ward, second vice president; Dr. Donald C. Sharpe, secretary; Dr. Harry A. Sibley, treasurer; Dr. Donald C. Conzett, delegate; and Dr. Lafe H. Fritz, alternate delegate. All officers are of Dubuque. The scientific program was comprised of a lecture on Problems of Oral Surgery by Carl W. Waldron, M.D., D.D.S., professor of Oral Surgery of the University of Minnesota Medical School, and a paper on Reconstruction Problems in Plastic Surgery by Captain James T. Mills, M.C., U.S.N.R., Chief of Plastic Surgery at the Great Lakes

Naval Hospital. Members of the Dubuque County Dental Society, as well as doctors and dentists throughout the tri-state area, were guests of the medical group for the program.

### Greene County

Members of the Greene County Medical Society met jointly with the trustees of the Greene County Hospital Thursday evening, November 15, to discuss the construction of an addition to the Greene County Hospital. The Society voted in favor of the addition and endorsed the hospital trustees' proposal of a county bond issue in the amount of \$100,000 for the purpose.

The December meeting of the Society was held at the Hospital Thursday evening, December 20, at seven-thirty o'clock. The scientific program consisted of a talk on Burns by Laurence C. Hanson, M.D., of Jefferson.

J. R. Black, M.D., Secretary

### Johnson County

The regular monthly meeting of the Johnson County Medical Society was held in Iowa City at Hotel Jefferson Wednesday, December 12, at 6:00 p. m. The annual election of officers was held with the following results: Dr. Edward W. Paulus, president; Dr. Robert C. Hardin, vice president; Dr. Rubin H. Flocks, secretary-treasurer; Drs. Stuart C. Cullen, John W. Dulin, and Andrew W. Bennett, delegates; and Drs. Paul A. Reed, Carl L. Gillies, and Ralph A. Dörner, alternate delegates. All officers are of Iowa City.

The scientific program was held following the business meeting and consisted of a paper on Recent Advances in Blood Transfusion by Elmer L. DeGowin, M.D., Associate Professor of Theory and Practice of Medicine, and Head of the Blood Bank at the University Hospitals, and Robert C. Hardin, M.D., Associate in the Department of Medicine, who directed the Blood Transfusion Service for the European Theater of Operations.

R. H. Flocks, M.D., Secretary

### Lee County

The Lee County Medical Society held its annual meeting in Keokuk at Hotel Iowa Friday afternoon, December 14, at three o'clock. The scientific program was comprised of a talk and round table discussion of Diseases Peculiar to the Newborn. Julian D. Boyd, M.D., of the State University of Iowa College of Medicine, was the guest speaker. Dinner was served at six o'clock.

### Mahaska County

Members of the Mahaska County Medical Society met in Oskaloosa for a dinner meeting at the Down-

ing Hotel Thursday evening, December 6. The guest speaker of the evening was Dr. Kenneth MacDonald, Professor of Hygiene at the State University of Iowa College of Medicine, who discussed Tropical Diseases. Dr. MacDonald, who had first hand experience in the treatment of such diseases during the war, stressed those diseases which can be readily transmitted to this country and also showed a microscopic exhibit of tropical diseases.

#### Marion County

The annual meeting of the Marion County Medical Society was held in Knoxville Thursday evening, December 6, at six-thirty o'clock. Following dinner a number of case reports were given by various physicians in attendance and Dr. Francis M. Roberts, retiring president, gave a brief talk. The following officers were elected for the coming year: Dr. Vance J. Elliott of Knoxville, president; Dr. Ernest C. McClure of Bussey, vice president; Dr. Dwight A. Mater of Knoxville, secretary-treasurer; Dr. McClure, delegate; and Dr. Herman C. Vander Meulen of Pella, alternate delegate.

#### Marshall County

The Marshall County Medical Society held its annual dinner meeting at Hotel Tallcorn in Marshalltown Tuesday evening, December 4. Officers elected to serve the Society during 1946 were Dr. John E. Sinning, president; Dr. Louis L. Bowie, vice president; and Dr. Otis D. Wolfe, secretary-treasurer. All officers are of Marshalltown. Adolph L. Sabs, M.D., of the State University of Iowa College of Medicine, was the guest speaker of the evening. He spoke on Herniated Lumbar Intervertebral Disks.

#### Polk County

The regular monthly meeting of the Polk County Medical Society was held in Des Moines at the Des Moines Club Wednesday evening, December 19. The scientific program consisted of discussion of Streptomycin by Diedrich J. Haines, M.D., of Des Moines, who recently returned from military service.

#### Poweshiek County

The Poweshiek County Medical Society held its annual meeting in Grinnell Tuesday evening, December 11. Officers elected for the ensuing year were Dr. Harry C. Parsons of Grinnell, president; Dr. Delano Wilcox of Malcom, vice president; Dr. Clinton E. Harris of Grinnell, secretary; Dr. John T. Padgham of Grinnell, treasurer; Dr. S. Dale Porter of Grinnell, delegate; and Dr. Ora F. Parish of Grinnell, alternate delegate. The guest speaker of the evening was Mr. Edwin M. Kingery, Executive Director of Iowa Medical Service, who explained the organization and told of its future plans.

C. E. Harris, M.D., Secretary

#### Scott County

The December meeting of the Scott County Medical Society was held at the Lend-A-Hand Club in

Davenport, Tuesday evening, December 4, at six o'clock. The scientific program consisted of a talk on The Cause of Gastric and Duodenal Ulcers and Their Medical and Surgical Management by Donald Cook, M.D., of the Lake Zurich Clinic, Lake Zurich, Illinois.

L. J. Miltner, M.D., Secretary

#### Wapello County

At a recent meeting of the Wapello County Medical Society Dr. Robert O. Hughes of Ottumwa was elected president for the coming year. Other officers named were Dr. Thomas L. Vineyard of Ottumwa, vice president; Dr. Lawrence A. Taylor of Ottumwa, secretary-treasurer; Dr. Clyde A. Henry of Farson, delegate; and Dr. Harold A. Spilman of Ottumwa, alternate delegate.

#### Warren County

The Warren County Medical Society held its annual election of officers at a meeting of the Society Monday evening, December 10, in Indianola. Dr. Melvin B. Cunningham of Norwalk was named president; Dr. Clare A. Trueblood of Indianola, vice president; and Dr. Claire H. Mitchell, secretary-treasurer.

#### Washington County

The Washington County Medical Society held its annual business meeting Thursday, December 13. The following officers were chosen for the coming year: Dr. Enos D. Miller of Wellman, president; Dr. Murry L. McCreedy of Washington, vice president; Dr. William S. Kyle of Washington, secretary-treasurer; and Dr. William L. Alcorn of Washington, delegate. George H. Scanlon, M.D., of Iowa City was the guest speaker of the evening and presented an illustrated lecture on The Treatment of Fractures of the Arm and Leg.

W. S. Kyle, M.D., Secretary

#### Woodbury County

The annual meeting of the Woodbury County Medical Society was held at the Martin Hotel in Sioux City Thursday evening, December 13. Election of officers was held with the following results: Dr. Raymond J. Harrington, president-elect; Dr. Roland T. Rohwer, vice president; and Dr. Robert C. Mugan, secretary-treasurer. Dr. Clifford R. Watkin was installed as president, having been chosen president-elect last year. All officers are of Sioux City.

#### PERSONAL MENTION

The JOURNAL is pleased to announce the release of the following physicians from active military duty:

Dr. Bruce V. Andersen has resumed his practice in Greene after having obtained his release from active duty in the Navy Medical Corps. Dr. Andersen held the rank of Lieutenant at the time of his release.

Dr. A. Reas Anneberg has recently received his discharge from the Army Medical Corps and plans



to resume his practice in association with Drs. Anneberg and Martin of Carroll. Dr. Anneberg was on active duty for more than three years, twenty months of which were spent in the Pacific Theater; he held the rank of Captain at the time of his release.

Dr. Walter A. Anneberg has returned to Carroll after receiving his discharge from the Army Medical Corps. He reported for active duty in October 1942 and the last twenty-eight months of his military service were spent in the European Theater of Operations. Dr. Anneberg, an Army Major, plans to resume his association with Drs. Anneberg and Martin of Carroll.

Dr. Charles J. Baker recently reopened his office in the Carver Building in Fort Dodge after having been on active military duty since February 1941. Dr. Baker, a Major in the Army Medical Corps, plans to specialize in pediatrics.

Dr. Winston C. Baltzell has resumed his practice in Charles City following his release from active military duty. Dr. Baltzell, a Major in the Army Medical Corps, served in the European Theater.

Dr. John C. Barton of Independence, who has served more than three years in the Army Medical Corps, has recently been released from active duty. He held the rank of Lieutenant Colonel at the time of his release.

Dr. Martin A. Blackstone has resumed his practice in Sioux City following his release from active duty with the Army Medical Corps. Dr. Blackstone, a Captain, has been in service more than three years and has just recently returned from the Pacific Theater.

Dr. Lawrence A. Block has reopened his office in the First National Bank Building in Davenport after more than three and a half years of active duty in the Army Medical Corps, several months of which were spent in the European Theater. Dr. Block held the rank of Lieutenant Colonel at the time of his release.

Dr. Galen C. Boller, who was located in Traer prior to entering military service, has now received his discharge after four and a half years of active military duty and plans to take some postgraduate training before resuming his practice. Dr. Boller served as a Captain in the Army Medical Corps.

Dr. Thomas E. Brobyn has resumed his practice in Grinnell following his release from the Army Medical Corps. Dr. Brobyn, a Major at the time of his release, has been on active duty since January 1941. He spent fourteen months in the Aleutians.

Dr. Merle J. Brown has received his discharge from the Army and reopened his office in Davenport

in the Davenport Bank Building. Dr. Brown served in the European Theater and held the rank of Lieutenant Colonel at the time of his release.

Dr. Abner Buresh has resumed his practice in Lime Springs after having been released from active duty with the Navy. Dr. Buresh, a Lieutenant Commander in the Medical Corps, served in the Pacific Theater.

Dr. Arthur W. Burgess has returned to Iowa Falls to resume his medical practice after having been placed on inactive status with the Navy Medical Corps. Dr. Burgess, who held the rank of Lieutenant, was on active duty twenty-six months and spent part of that time on sea duty in the Atlantic.

Dr. Walter Byers has resumed his practice in Sheffield in association with Dr. Frederick H. Rode-meyer after having received his discharge from the Army Medical Corps. Dr. Byers went on active duty in 1940 and recently returned from service in the European Theater.

Dr. Walter V. Campbell has resumed his practice in Oskaloosa after being released from active duty with the Navy. Dr. Campbell, a Lieutenant Commander in the Medical Corps, recently returned from the Pacific Theater.

Dr. Ralph C. Carpenter has returned to Marshalltown to resume his medical practice following his release from active military duty. Dr. Carpenter, who held the rank of Captain at the time of his discharge from the Army Medical Corps, spent several months in the European Theater of Operations.

Dr. John D. Caulfield has returned to New Hampton to resume his medical practice after more than three years of active duty in the Army Medical Corps. Dr. Caulfield held the rank of Major at the time of his release.

Dr. John D. Conner has received his discharge from the Army Medical Corps and plans to resume his practice in Nevada after the first of the year. Dr. Conner, who has been in service more than four years, just recently returned from the Pacific Theater. He held the rank of Captain at the time of his release.

Dr. Donald C. Conzett has reopened his office in the Roshek Building in Dubuque after four years of active duty with the Army Medical Corps. Dr. Conzett, who recently returned from two years of service in the European Theater, held the rank of Lieutenant Colonel at the time of his release.

Dr. Raymond E. Cooper has resumed his practice in Keokuk after having received his discharge from the Army Medical Corps. Dr. Cooper served as a Captain in the Pacific Theater.

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Dr. Dale D. Cornell has reopened his office in Greenfield after having been on active duty with the Army Medical Corps since May 1941. Dr. Cornell, a Lieutenant Colonel, served forty-four months in the Pacific Area and just recently returned to the States.

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Dr. William P. Davey, who was located in Emmetsburg prior to entering military service, has now been placed on inactive status with the Navy Medical Corps and is serving a residency in the New York City Hospital. Dr. Davey held the rank of Lieutenant at the time of his release.

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Dr. Charles H. Fee has resumed his practice in Denison in association with Dr. Frank N. Rowe. Dr. Fee went on active duty with the Army Medical Corps in August 1942 and served as a flight surgeon with a troop carrier unit in Italy, Africa, England, France, Belgium, and Germany. Dr. Fee held the rank of Major at the time of his release.

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Dr. Joe G. Fellows has received his discharge from the Army Medical Corps and resumed his medical practice in Ames in association with Drs. Lee E. Rosebrook and Arthur N. Schanche. Dr. Fellows, a Major at the time of his release, was in the armed forces thirty-six months, twelve of which were in the European Theater of Operations.

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Dr. Charles D. Fenton has returned to Bloomfield after having received his discharge from the Army Medical Corps and plans to resume his practice in the near future. Dr. Fenton, a Captain at the time of his release, just recently returned from the European Theater.

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Dr. Norman C. Flater has resumed his practice in Floyd after serving more than three years in the Army Medical Corps. At the time of his release, Dr. Flater held the rank of Captain.

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Dr. Roger R. Flickinger has returned to Mason City and resumed his work as eye, ear, nose and throat specialist at Park Hospital. Dr. Flickinger was on active duty with the Army Medical Corps three years and held the rank of Captain at the time he received his release.

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Dr. Arthur F. Fritchen has been released from active duty with the Navy Medical Corps and plans to resume his practice in Decorah. Dr. Fritchen, a Commander at the time he was placed on inactive status, was in service five years and just recently returned from the Pacific Theater.

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Dr. Emil A. Fullgrabe, who prior to entering military service was located in Indianola, has been placed on inactive status with the Navy Medical Corps and has become pathologist at Broadlawns General Hospital in Des Moines. Dr. Fullgrabe had been on active duty since October 1942; in March 1944 he went overseas where he served as laboratory officer

in a base hospital at Oran in Algeria. He held the rank of Lieutenant Commander at the time of his release.

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Dr. John P. Gallagher has resumed his practice in Oelwein following his release from active duty as Naval Flight Surgeon. He held the rank of Lieutenant Commander in the Navy Medical Corps.

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Dr. Robert O. Garlinghouse has received his discharge and has returned to the University Hospitals in Iowa City. Dr. Garlinghouse, a Lieutenant Colonel in the Army Medical Corps, has been in military service for more than four years.

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Dr. Andrew V. Grinley has resumed his practice in Rockwell City after more than three years of service in the Army Medical Corps. Dr. Grinley, a Captain at the time of his release, served in the European Theater.

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Dr. C. Ferrill Hamilton of Jefferson is on terminal leave from the Army Medical Corps after having been on active duty since 1941. Dr. Hamilton held the rank of Captain at the time of his release. He returns to the Mayo Foundation in Rochester, Minnesota, January 1 to resume work on his fellowship in surgery.

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Dr. Byron D. Hartley has reopened his office in Mount Pleasant after more than forty-one months of active duty with the Army Medical Corps. Dr. Hartley served as a Captain in both England and Germany.

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Dr. Willard W. Hayne has resumed his practice in Paullina after having received his discharge from the Army Medical Corps. At the time of his release, Dr. Hayne held the rank of Captain.

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Dr. Carl A. Heise, Jr., who practiced in Missouri Valley prior to the time he reported for active duty with the Navy Medical Corps, has now been placed on inactive status and plans to resume his practice in Iowa. Dr. Heise was in service forty-four months, thirty of which were spent on sea duty in the Atlantic and Pacific. He held the rank of Lieutenant Commander at the time of his release.

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Dr. Don E. Hill of Clinton has received his discharge from the Army Medical Corps and has returned to that city to resume his medical practice. He has been in military service for more than three years and held the rank of Captain at the time of his release.

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Dr. Charles N. Hoyt of Cedar Falls has received his discharge from the Army Medical Corps after more than three years of active duty. Dr. Hoyt served as a Captain in the European Theater.

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Dr. Robert O. Hughes has opened his office in Ottumwa after having been placed on inactive status



in the Navy Medical Corps. He will limit his practice to diseases of children. Dr. Hughes was released from the Navy with the rank of Commander after more than three years of active duty.

Dr. Arnold L. Jensen has returned to Council Bluffs after more than four years of active duty with the Army Medical Corps. Dr. Jensen held the rank of Lieutenant Colonel at the time of his release.

Dr. C. Harlan Johnston has received his discharge from the Medical Corps of the Army Air Forces after five years of active duty and has returned to Des Moines where he will resume his medical practice. Dr. Johnston, who held the rank of Lieutenant Colonel, served overseas in the European Theater.

Dr. Ernest G. Kieck has returned to Cedar Rapids to resume his medical practice after more than three years of service with the Navy Medical Corps. Dr. Kieck held the rank of Commander at the time of his release.

Dr. Dean H. King has resumed his practice in Spencer following his release from the Army Medical Corps. Dr. King, who was in military service for more than three years, held the rank of Captain at the time he received his discharge.

Dr. Harold L. Klockslem is establishing an office in Story City the first of the year after having received his discharge from the Army Medical Corps. He served as a Captain in the European Theater of Operations.

Dr. Russell A. Knight has reopened his office in Rockford following his release from active duty in the Navy Medical Corps. Dr. Knight, a Lieutenant at the time of his release, spent more than three years in military service.

Dr. Frederick D. Koehne, who practiced in Audubon before entering military service, has received his discharge from the Army and has established an office in Oakland. Dr. Koehne was on active duty for more than four years and held the rank of Major at the time of his release.

Dr. Edwin S. Korfmacher has resumed his practice in Grinnell after having served more than three years in the Army Medical Corps. He recently received his discharge after returning to the States from twenty-eight months of service in the Pacific Theater. He held the rank of Major at the time of his release.

Dr. Harold T. Larsen has reopened his office in the Snell Building in Fort Dodge following his release from active duty in the Navy Medical Corps. Dr. Larsen held the rank of Lieutenant when he was placed on inactive status after more than three years of service.

Dr. Marvin O. Larson has resumed his practice in Hawarden after having received his discharge from the Army Medical Corps. Dr. Larson was called to active duty in December 1940 and his overseas duty was spent in Europe; he held the rank of Lieutenant Colonel at the time of his release.

Dr. Samuel P. Leinbach has returned to Belmond to resume the practice of medicine after three years of service in the Navy Medical Corps. Dr. Leinbach, a Lieutenant Commander, served in both the Atlantic and Pacific areas.

Dr. Robert T. Lenaghan was recently released from active duty with the Navy Medical Corps and has resumed his practice in Clinton. Dr. Lenaghan entered military service in September 1942 and served more than a year in a fleet hospital in the South Pacific area. He held the rank of Lieutenant Commander.

Dr. Lester K. Leserman, who was located in Rolfe before entering military service, has now received his discharge and plans to resume his practice in Iowa. Dr. Leserman was on active duty for more than three years and just recently returned from the Pacific Theater. He held the rank of Captain at the time of his release.

Dr. William B. Lewis has resumed his practice in Webster City following his release from active duty with the Army Medical Corps. Dr. Lewis served as a Major in the European Theater and just recently returned to the States.

Dr. Ellsworth L. Lindley has received his discharge from the Army Medical Corps and has established an office in Muscatine. Dr. Lindley, a Captain at the time of his release, recently returned from the Pacific Theater.

Dr. Freeman H. Longwell has received his discharge after more than five years of military service and has returned to the University Hospitals in Iowa City. Dr. Longwell, a Major in the Army Medical Corps, served overseas in the European Theater.

Dr. E. Parish Lovejoy has resumed his medical practice in Des Moines after having been placed on inactive status in the Navy Medical Corps. Dr. Lovejoy was released from the Navy with the rank of Commander after more than three years of active duty.

Dr. Arthur L. Ludwick, Jr., of Waterloo, has received his discharge from the Army Medical Corps and plans to resume his medical practice in that city. He has been in military service for more than four years and held the rank of Major at the time of his release.

Dr. Eugene J. Maire has returned to Vail to resume his medical practice after more than three

years of active duty with the Army Medical Corps. Dr. Maire held the rank of Captain at the time of his release.

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Dr. Harry M. McCuiston has resumed his practice in Sioux City with offices in the Davidson Building. Dr. McCuiston, a Major in the Army Medical Corps, was in service more than three years and just recently returned from the European Theater.

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Dr. John C. McKitterick has returned to Burlington to resume his medical practice after five years of active duty with the Navy Medical Corps. Dr. McKitterick held the rank of Commander at the time he was placed on inactive duty.

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Dr. Robert F. Moerke has resumed his practice in Burlington following his release from active duty with the Army Medical Corps. Dr. Moerke served as a Major in the Pacific Theater and just recently returned to the States.

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Dr. Guy E. Montgomery has received his discharge from the Army Medical Corps and plans to resume his medical practice in Keota. Dr. Montgomery, a Captain, has been on active duty for more than three years and has just returned from the Pacific Theater.

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Dr. Julius M. Moskovitz, who was located in Council Bluffs prior to entering military service, has now received his discharge and has located in Los Angeles, California, where he has offices in the Wilshire Medical Building. Dr. Moskovitz served in the Army Medical Corps for more than three years and held the rank of Captain at the time of his release.

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Dr. Clyde G. Nicholson has returned to Spirit Lake to resume his medical practice after more than three years of service in the Army Medical Corps. Dr. Nicholson held the rank of Major at the time he received his discharge.

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Dr. John E. Norment has returned to Clinton after having been placed on inactive duty by the Navy Medical Corps. Dr. Norment, a Commander, was released from the Navy after four years of active duty.

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Dr. Edward W. Paulus has resumed his medical practice in Iowa City in association with Dr. Andrew W. Bennett after having received his discharge from the Army Medical Corps. Dr. Paulus, a Lieutenant Colonel at the time of his release, was on active duty almost five years, forty months of which were spent overseas in Ireland, North Africa, and Italy.

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Dr. James W. Paulus has returned to Dubuque where he has resumed his practice with the Medical Associates. Dr. Paulus entered military service in October 1942 and since that time has served two tours of duty in the European Theater. Dr. Paulus held the rank of Captain at the time of his release.

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Dr. Harold J. Peggs is establishing an office in Des Moines in Beaverdale after having received his discharge from the Army Medical Corps. Dr. Peggs, a Major in the Air Force Fighter Division in the Pacific, spent more than four years in military service.

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Dr. Eugene C. Penn has returned to West Des Moines after having received his discharge from the Army Medical Corps. Dr. Penn had been on active duty for more than three years and held the rank of Captain at the time of his release.

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Dr. Eric P. Pfeiffer has received his discharge from the Army Medical Corps after more than three years of active duty. Dr. Pfeiffer, who was in the Division of Vital Statistics of the State Department of Health before entering military service, plans to re-enter public health work at the expiration of his terminal leave. Dr. Pfeiffer held the rank of Major at the time of his release.

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Dr. Richard E. Phelps, who practiced in State Center prior to entering military service, has been released from active duty and is locating in New Sharon after the first of the year. Dr. Phelps served more than three years in the Army Medical Corps and at the time of his release held the rank of Captain.

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Dr. Lester D. Powell has returned to Des Moines to resume his medical practice in the Equitable Building after having been placed on inactive duty by the Navy Medical Corps. Dr. Powell was released from the Navy with the rank of Captain after more than four years of active duty.

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Dr. Rothwell D. Proctor plans to resume his practice in Cedar Rapids the first of the year. He has recently been placed on inactive status after having been on active duty since March 1942. Dr. Proctor held the rank of Captain in the Navy Medical Corps at the time of his release.

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Dr. Francis P. Quinn has returned to Dubuque and established his office in the Roshek Building. Dr. Quinn served with the Army Medical Corps for more than three years and at the time of his release held the rank of Major.

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Dr. Richard E. Reiley of Oskaloosa has obtained his release from active duty with the Army Medical Corps after thirty-six months of overseas service. After January 1 he plans to locate in Minneapolis where he will specialize in orthopedics. Dr. Reiley held the rank of Major at the time of his release.

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Dr. Edward B. Rhomberg has returned to Guttenberg to resume his medical practice following his release from active duty in the Army Medical Corps. Dr. Rhomberg served as a Captain in the European Theater and has just recently returned to the States.



Dr. Floyd O. Rolfs has resumed his practice in Parkersburg after serving more than three and a half years with the Army Medical Corps, part of which time was spent in North Africa, Sicily, Italy, France, and Germany.

Dr. Clark R. Rominger has reopened his office in Waukon following his release from active duty with the Army Medical Corps. Since his return he has been named coroner of Allamakee County.

Dr. Donald C. Sharpe has been released from active duty and has resumed his practice in Dubuque where he is a member of the staff of the Medical Associates. Dr. Sharpe, a Major in the Army Medical Corps, has fifty-five months of service, eighteen of which were spent in the European Theater of Operations.

Dr. Ernest E. Shaw has returned to Indianola where he will resume his practice shortly after the first of the year. Dr. Shaw was on active duty with the Army Medical Corps for more than three years, most of which time was spent in the Panama Canal Zone. He held the rank of Major at the time of his release.

Dr. Joseph R. Shorey has reopened his office in the First National Bank Building in Davenport after more than two years of service in the Army Medical Corps, including nineteen months in England. At the time of his release he held the rank of Major.

Dr. Herman J. Smith has returned to Des Moines and reopened his office in the Equitable Building after more than three years of active duty with the Navy Medical Corps, most of which time was spent in the Pacific Theater. Dr. Smith was a Lieutenant Commander at the time he was placed on inactive duty.

Dr. Herbert A. Sohm will resume his practice in Des Moines the first of the year with offices in the Des Moines Building. Dr. Sohm, a Commander in the Navy Medical Corps, has been placed on inactive status after more than three years of active duty.

Dr. Wendell B. Sperow has been placed on inactive status by the Navy Medical Corps and has returned to Nevada to resume his medical practice. Dr. Sperow, a Lieutenant Commander, was released from the Navy after more than three years of service, the last year of which was spent in the Pacific Theater.

Dr. James W. Standeven has received his discharge from the Army Medical Corps and has established an office in Oakland for the general practice of medicine. Dr. Standeven held the rank of Captain at the time of his release.

Dr. John R. Stansbury of Cedar Rapids has received his discharge from the Army and plans to

enter the practice of medicine in Iowa. Dr. Stansbury served as a Captain in the Medical Corps.

Dr. Lincoln F. Steffens has returned to Dubuque and rejoined the staff of the Medical Associates after fifty-five months of active duty in the Army Medical Corps. Dr. Steffens held the rank of Lieutenant Colonel at the time he received his discharge.

Dr. Isaac Sternhill has recently received his discharge from the Army Medical Corps and is resuming his practice in the Bennett Building in Council Bluffs, as well as his association with the Creighton University School of Medicine in the Department of Obstetrics. Dr. Sternhill, a Major, was in military service forty-three months, of which fourteen were spent in Alaska.

Dr. Arthur E. Sulek is resuming his practice in Cedar Rapids in the Higley Building after serving since December 1940 in the Army Medical Corps. Dr. Sulek spent the greater part of his service in the Pacific Theater and at the time of his release held the rank of Lieutenant Colonel.

Dr. John H. Sunderbruch has reopened his office in Davenport following an absence of more than three years during which he was on active duty with the Army Medical Corps. Dr. Sunderbruch served as a Captain in the Pacific Theater.

Dr. Reinert N. Svendsen has returned to Decorah to resume his medical practice following his release from active duty with the Navy Medical Corps. Dr. Svendsen held the rank of Lieutenant at the time he was placed on inactive status.

Dr. Robert N. Tindall of Coon Rapids has received his discharge from the Army and is now located at Barnes Hospital in St. Louis. Dr. Tindall, who held the rank of Major in the Medical Corps, had been on active duty for more than three years.

Dr. Jack V. Treynor has resumed his practice in Council Bluffs after more than three and a half years of service with the Navy Medical Corps. Dr. Treynor, a Commander at the time he was released from active duty, will limit his practice to diseases of the eye, ear, nose and throat.

Dr. Donovan F. Ward has reopened his office in the Roshek Building in Dubuque following his release from the Navy Medical Corps. Dr. Ward entered military service in 1942 and was a Lieutenant Commander at the time he was placed on inactive duty.

Dr. Gabriel S. Westly has returned to Manly and reopened his office following his release from active military duty. Dr. Westly entered the armed forces in 1942 and held the rank of Major in the Army Medical Corps at the time he received his discharge.

Dr. Max A. Wetrich, who was located in Manilla prior to entering military service, has recently received his discharge and has established an office in Grand Junction in the Dutton Bank Building. Dr. Wetrich, a Captain in the Army Medical Corps, was on active duty more than three years.

Dr. Keith E. Wilcox, who was recently released from active duty with the Army Medical Corps, has established an office for the practice of medicine and surgery in association with Drs. Thomas F. Beveridge and Lysle C. Howe in the Laurel Building in Muscatine. Dr. Wilcox entered military service in January 1941 and his foreign service was spent in Africa, Sicily, Italy, France, and Germany.

Dr. Paul L. Wolpert has received his discharge from the Army Medical Corps and has resumed his practice in Onawa in association with Dr. Leo A. Gaukel. Dr. Wolpert held the rank of Captain at the time of his release.

The following physicians, who were previously reported released from active military duty, have announced the establishment of their offices in new locations:

Dr. Bruce F. Howar, who formerly practiced in Jewell, has opened his office in Webster City over Frank's Clothing Store.

Dr. Ellis K. Vaubel has established an office in Estherville over the Birney Drug Store. Dr. Vaubel was associated with the State Department of Health in Des Moines before entering military service.

Dr. Ralph L. Wicks, who practiced in Winterset before joining the Army, has opened his office in the Boone National Bank Building in Boone for the general practice of medicine and surgery.

Dr. Edward L. Besser, who has been on the surgical staff at the University of Iowa College of Medicine since 1939, has resigned his position there and has entered the private practice of medicine in Manchester, Connecticut.

Dr. Eloise M. Foltz, who has practiced in Perry for nearly fifty-two years, has retired from active practice and moved to Denver, Colorado, to make her home.

Dr. William P. Hombach of Council Bluffs has announced his retirement after nearly forty-five years of active medical practice in that city. His son, Dr. Walter Hombach, will take over the practice.

Dr. George H. Martin of Eagle Grove has announced his retirement as of January 1 after having been in active practice in that city since 1917. His practice has been purchased by DR. MARTIN J.

SCHAEFERLE who recently received his discharge from the Army Medical Corps. Dr. Schaeferle served his internship in Broadlawns General Hospital in Des Moines just prior to entering military service.

Dr. Otto H. Pagelsen has retired from the active practice of medicine after forty-five years of continuous service in Iowa Falls. Dr. Pagelsen plans to spend the winter in the South but will return to Iowa Falls in the spring.

Dr. Frederick S. Katzmman recently announced the opening of his office in Des Moines in the Des Moines Building for the general practice of medicine and surgery.

Dr. Loraine W. Ward, who has been a practicing physician in Fairbank for the past thirty years, has taken over the practice of his brother, the late Dell W. Ward of Oelwein.

#### MARRIAGE

Lt. Therese Ingrato, WAC, daughter of Joseph Ingrato of Green Island, New York, and Major Ralph DeCicco, M.C., son of Mr. and Mrs. A. DeCicco of Des Moines, were married Tuesday, December 11, at 1:15 p.m. at Christ the King church in Des Moines. Mrs. DeCicco has been stationed at Fort Des Moines as dietitian at the post hospital and Major DeCicco, who served for four years in the Pacific Theater, is now on terminal leave. After January 1 the couple will be at home in Des Moines where Major DeCicco will resume his practice.

#### DEATH NOTICES

Greenleaf, William Slater, of Atlantic, aged seventy-three, died December 9 of a heart ailment. He was graduated in 1895 from the State University of Iowa College of Medicine, and at the time of his death was a life member of the Cass County and Iowa State Medical Societies.

Jepson, William, of Sioux City, aged eighty-two, died November 30, following an operation which he had undergone several weeks before. He was graduated in 1886 from the State University of Iowa College of Medicine, and at the time of his death was a life member of the Woodbury County and Iowa State Medical Societies. A more complete obituary will be found in the History of Medicine section of this issue.

York, Nathan Albert, of Lisbon, aged seventy-nine, died December 3 of a heart attack in St. Petersburg, Florida, where he and Mrs. York had gone to spend the winter. He was graduated in 1900 from the State University of Iowa College of Medicine, and at the time of his death was a member of the Linn County and Iowa State Medical Societies.



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### RESULTS OF ADMINISTRATION OF VARYING DOSES OF SODIUM BROMIDE

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During the last fifteen years numerous articles have appeared in the medical literature describing cases of intoxication or psychosis produced by the ingestion of bromides. Several reviews of this subject have appeared in the literature, two of the recent ones being those by Moore, Sohler, and Alexander,<sup>1</sup> and Jellinek, Angyal, Cohen, and Miller.<sup>2</sup> In this literature are many points of controversy. Among them are: (1) What constitutes the syndrome of bromide intoxication? (2) What is the minimum blood bromide level at which symptoms appear? (3) Is there any relationship between symptomatology and blood bromide level? (4) Is there such a thing as bromide psychosis? Little experimental work has been done on the subject of bromism. Flinn<sup>3</sup> has studied the blood serum bromide levels obtained after oral ingestion of sodium bromide. He concluded, "The ingestion of 30 to 45 grains of sodium bromide daily over a four-month period does not result in a high blood bromide (level), and does not affect the nervous reactions." Bondurant and Campbell<sup>4</sup> gave 60 to 120 grains of bromide to each of seven patients having epilepsy. No comment was made about the symptoms produced. Boshes<sup>5</sup> conducted a study of the action of bromides in clinical and experimental epilepsy. He produced bromide intoxication in nine cases at an average level of 243.4 milligrams of sodium bromide per 100 cubic centimeters of blood serum. Little is said about the symptoms of these patients. Barbour et al.<sup>6</sup> gave bromides to six young men in doses of 180 grains a day. The drug was stopped when the blood serum sodium bromide level reached 250 to 300 milligrams per cent. Four of the patients showed

no toxic signs; one complained of going to sleep in the afternoon; and one became boisterous and truculent. Recently, Jellinek and his co-workers<sup>2</sup> reported an experimental study of bromism. Serum "bromide" levels averaging 142 milligrams per cent were achieved in the course of four weeks of bromidization in 78 normal subjects. These subjects showed no symptoms of either bromide psychosis or intoxication, but merely the effects of sedation. In addition a group of 28 psychotic patients was given larger amounts of bromide. These patients reached a mean serum "bromide" level of 228 milligrams per cent with a maximum of 310 milligrams per cent. In this group 57 per cent of the subjects showed some signs of bromide intoxication without any considerable exacerbation of the psychotic symptoms.

Bromides are often prescribed by the physician as a means of relieving nervous tension for patients with some type of psychoneurosis or patients with organic disease, but who, also, have some complaints of a functional nature. No adequate effort has been made to reproduce, under controlled conditions, the bromism in these particular groups. It is the purpose of this paper to record the method used, the observations noted, and the conclusions to be drawn from the study of a group of 36 patients to whom large doses of sodium bromide were given over long periods of time.

#### METHOD

The patients selected for this study are among routine admissions to the Neurology Service. The admission work-up of these patients includes a general history, physical examination, neurologic examination, and evaluation of the mental state by a neuropsychiatrist. An intelligence quotient is obtained. The urine is examined. Red blood count, white blood count, differential blood count, and hemoglobin determinations are all made. The blood urea nitrogen, chloride, and blood creatinine values are determined. The blood serology is checked. Spinal fluid pressure, cell count, and

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spinal fluid protein determinations are all done. Special examinations including roentgenograms and consultations with other departments are done when necessary.

After these examinations a control period for observation on a routine hospital diet and fluid intake elapses. The blood bromine content is then determined. A number of different methods are available for making this determination. During the early days of quantitative bromide tests, the one most commonly used was the Wuth<sup>7</sup> method. Unfortunately, according to Gray and Moore,<sup>8</sup> this test is inaccurate, particularly at high and low blood bromide levels. The results obtained by the Wuth method are expressed in milligrams of sodium bromide per 100 cubic centimeters of blood serum. This is a fact which most authors ignore when recording their results. Only 77 per cent of the Wuth figure for sodium bromide is actual bromine—which is present in the blood as bromide ion. Therefore, when Curran<sup>9</sup> cites a case of bromide psychosis with a "blood bromide level of 55 milligrams per cent," the amount of bromide is actually only 42 milligrams per cent, and at such a level the test is not accurate. Barbour et al.<sup>6</sup> make clear the point that all of the blood bromide concentrations reported in their paper are in terms of milligrams of sodium bromide per 100 cubic centimeters of blood serum, but Hanes and Yates<sup>10</sup> continually refer to blood bromide levels while using only the Wuth method which, as noted above, gives a result in terms of milligrams per cent of sodium bromide. In order to avoid this combination of inaccuracy and indefiniteness, we have used a modification of the Brodie-Friedman<sup>11</sup> test for our determinations. This method detects bromide quantitatively at levels as low as 5 milligrams per cent, and as high as 500 milligrams per cent with an error of not more than 5 per cent at any given level. The results are expressed in terms of milligrams of bromine present per 100 cubic centimeters of blood serum. The "Wuth" figure corresponding to a given bromine level by the Brodie-Friedman method would be approximately 30 per cent higher.

The patient is then started on a definite amount of sodium bromide, given in equally divided doses three times a day following meals. The patient is checked daily for any unusual symptoms or signs by a neuropsychiatrist. Blood is drawn at frequent intervals for bromine and chloride determinations. A chart is kept which includes the date, dose of sodium bromide, blood bromide and chloride content, blood pressure, pulse, and notes concerning the patient's reactions, mental state, and general physical condition. Blood urea and

creatinine values are obtained at intervals. After the patient has been taking the sodium bromide for at least ten days, a gastroscopic examination is done. Other special examinations are done when thought necessary.

Observations have been completed on 36 patients. Twenty-five of the patients were male

TABLE I

Age	Number of Cases
10-25	4
25-50	22
50-70	10

and 11 were female. Table I shows the age distribution of these patients, and Table II shows the various diagnoses and the number of patients falling into each diagnostic class. Six patients had both functional and organic disease. Of the 18 patients having neurosyphilis, seven were meningo-vascular, eight were tabetic, two were asymptomatic, and one was parietic. The latter was a man with symptoms indicative of mild cerebral

TABLE II

DIAGNOSIS	Number of Cases
Functional	
Psychopathic personality	4
Psychoneurosis	9
Organic	
Neurosyphilis	18
Posttraumatic	1
Arteriosclerosis	4
Multiple sclerosis	3
Pseudotumor	1
Ruptured aneurysm	1
Chorea	1

deterioration. He was one of the patients placed on a total daily dose of 45 grains of sodium bromide, and during the course of that medication there was no change in his mental state. The other 17 patients in this group of neuroleptics had normal mental states. The patient with chorea will be described in detail later in this paper, and the other patients listed in Table II showed no evidence of mental abnormality. Only physiologic amounts of bromine were found in the sample of blood obtained from each patient immediately before beginning the sodium bromide medication.

These 36 patients can be divided into five groups depending on the amount of sodium bromide given daily. Table III shows these five groups with the number of patients in each. The amount of drug



TABLE III

Number of Patients	Sodium Bromide Dose (grs. t. i. d.)	Average Number of Days on Sodium Bromide	Longest Number of Days on Sodium Bromide	Average Highest Bromine Level	Highest Individual Bromine Level	Plateau Reached	Toxic Reaction			
							None	Intoxicated	Psychotic	Skin Rash
3	15	28	36	119	125	3	3	0	0	1
5	20	27	37	196	217	4	5	0	0	1
18	30	32	60	225	332	1	5	7	6	1
6	40	14	19	250	343	0	2	2	2	1
4	50	24	30	354	429	0	1	2	1	1

recorded in the table is the total daily dose of sodium bromide. The drug was given following meals in three equally divided doses. We found that as the dose increased the patients had more and more trouble retaining the sodium bromide. Frequently equal amounts of the drug had to be given again because of vomiting. The minimal gastric irritation was produced when the drug was given immediately following a meal. Only three patients were given a dose of 45 grains of sodium bromide daily. We were particularly interested in studying the toxic effects of the drug, and gradually shifted to higher doses as we found ourselves unable to produce toxic blood bromide levels in the lower dose ranges. The length of the period of time during which the drug was given was determined by whatever toxic symptoms and signs developed, or by the patient's desire to leave the hospital for some reason. The blood bromine curves of all the patients receiving 45 grains of the drug daily showed a definite plateau where the blood level remained fairly constant. This simply means that the blood serum bromine content reached a definite level and remained at that same level as long as the patient continued on that dosage of sodium bromide. Four of the five patients receiving 60 grains a day also developed blood bromine curves with a definite plateau where the level became relatively constant. However, only one patient of the 28 receiving 90 or more grains of the drug a day reached a constant blood bromine level. Twenty patients of this group developed some type of toxic reaction to the drug, and six patients left the hospital before either a constant blood level was reached or toxicity developed. We believe that these patients would ultimately have shown a plateau type of blood bromine with the development of a constant serum bromine level. However, most of the patients became so intoxicated that the medication was stopped before a constant serum bromine level was reached. About one-third of those receiving 90 or more grains of sodium bromide daily devel-

oped nausea and vomiting which could generally be controlled by giving the drug after a meal. Even with this precaution three patients continued to have digestive upsets during their entire course of medication.

#### SIGNS OF BROMIDE INTOXICATION

Many symptoms and signs are listed in the literature as being a part of the clinical picture of bromide intoxication and psychosis. Recently Sensenbach<sup>12</sup> stated, "mental confusion, stupor, delusions, headache, hallucinations, nervousness, weakness, disturbances in gait, brown furry coating of the tongue, palpitation, slurring of speech, irritability, depression or elation, insomnia, smothering spells, dizziness, anorexia, nausea and vomiting, transitory visual disturbances, and transitory incontinence," are the outstanding symptoms and signs of bromide intoxication. Hanes and Yates<sup>10</sup> include, "dull morning headache, constipation, indigestion, fatigue, irritability, sleeplessness, difficulty in concentrating, and poor memory," among the "early" symptoms of bromide intoxication. Diethelm,<sup>13</sup> Cuttino,<sup>14</sup> Craven,<sup>15</sup> and others have also recorded long lists of symptoms and signs as characteristic of bromide intoxication. The variety and multiplicity of these recorded characteristics of bromide intoxication are also characteristics of the clinical picture of psychoneurosis—the diagnosed condition for which bromides are most often prescribed.

Twenty of the 36 patients to whom we gave sodium bromide developed some type of "bromide involvement" or abnormal response. From the clinical observation of these 20 cases showing toxic signs, we were able to divide the group into two subdivisions: (1) patients having bromide intoxication, and (2) those having bromide psychosis. (The term "bromide psychosis" is used advisedly. We know that the condition is a toxic psychosis or delirium, and apparently differs from a primary psychosis such as schizophrenia or involutional melancholia. A better term for this clinical picture would be a toxic delirium due to bromides. However, for the sake of brevity, we shall refer to this state as a "bromide psychosis.") In attempting to determine what symptoms and signs were solely attributable to the toxic effects of sodium bromide, we included only those which developed following the ingestion of the drug. For instance, three patients complained of having moderate headache at the time of their admission examination. On bromide medication a portion of them continued to complain of headache in essentially the same degree as at the time of admission. In such a case headache could scarcely be called a sign of bromide intoxication.

Eleven patients developed bromide intoxication. The syndrome is clear-cut, characterized by the appearance of an increased desire to sleep, dulling of the acuteness of the higher mental functions, slurred speech, unsteady gait, and ultimately by clouding of consciousness. As the blood bromine content rises to a high level, the clouding of consciousness may progress to the place where incontinence, generalized helplessness, and disorientation for time appear. In such a case the patient lies in bed, apathetic and totally inattentive. The patient's general indifference apparently explains the occurrence of disorientation for time. Constipation, headache, insomnia, irritability, palpitation, and visual disturbances did not develop in any of the patients receiving sodium bromide. Nausea and vomiting occurred frequently, but they are not a part of the syndrome of bromide intoxication. They may occur the first day the medication is given, and are apparently produced by the irritating effect of the sodium bromide on the gastric mucosa. Two typical examples of this group are detailed below.

Case 26: D.P., a girl thirteen years of age, was admitted to the hospital complaining of headache and blurring of vision during the preceding month. Her mental state had been entirely normal. On physical examination the positive findings were bilaterally choked disks. All of the laboratory examinations were negative except for an increased cerebrospinal fluid pressure. A diagnosis was made of increased intracranial pressure of unknown cause. The patient was observed for three weeks, during which time she showed considerable symptomatic improvement, and the choked disks began to recede. The patient was then placed on 30 grains of sodium bromide three times a day. After ten days on this dosage the blood bromine level was 248 milligrams per cent. She exhibited no unusual symptoms or signs. At the end of the ten days the dose was changed to 40 grains three times a day. After seven days, the amount was increased to 50 grains three times a day. After two days of that amount the patient began to have a marked increase in the amount of her daytime sleep, seemed generally slowed, and began to have an unsteady gait. Her speech remained clear, she was oriented, fed herself, and was cooperative. The blood bromine level was 310 milligrams per cent. The dose was dropped back to 40 grains three times a day for eleven days, at the end of which time the drug was discontinued. The blood bromine level the last day the drug was given was 429 milligrams per cent. During the last eleven days of medication, the patient gradually became more somnolent until she remained asleep most of the time. At the high point of the bromide concentration in the blood the patient had to be bathed, she had to be fed, and at times she was incontinent. Her speech was markedly slurred. She was too ataxic to walk. Her attention was poor, but when

it was obtained she remained oriented for person, place, and day of the week. She had no complaints. She showed no excitement, no irritability, delusions, or hallucinations at any time. The patient was observed for 57 days, during which time she received no bromide. The blood bromine level gradually fell until at the time of her discharge from the hospital, it was 70 milligrams per cent. At a point on her blood bromine curve between 200 milligrams per cent and 250 milligrams per cent, the symptoms and signs of bromide intoxication disappeared.

Case 17: W.T., a white man twenty-three years of age, was admitted to the hospital complaining of headache, pain in the neck, and poor use of his left arm and leg. On physical examination the positive findings were a left hemiplegia, 1+, and a xanthochromic spinal fluid. A diagnosis of subarachnoid hemorrhage, probably due to a ruptured intracranial aneurysm, was made. The patient's mental state was normal. He was observed for six weeks, during which time he received physical therapy to his left arm and leg. The patient was then given 30 grains of sodium bromide three times a day. On this medication he vomited two to three times a day. The dose was decreased to 10 grains three times a day, which amount he was able to retain. The dose was gradually increased until he was taking 30 grains three times a day. He continued to experience considerable nausea and general gastric distress, but he did not vomit. After taking 90 grains a day for ten days, and a variable amount of the drug for an additional nine days, the patient's blood bromine level was 224 milligrams per cent. At this point he first complained of going to sleep while reading the newspaper. His speech, appearance, and gait were normal at that time. Six days later, with a blood level of 272 milligrams per cent, the patient for the first time noted mild slurring of speech and 1+ unsteadiness of gait. Four days later the blood bromine level was 306 milligrams per cent. The patient slept a great deal of the time, ate poorly, had slurred speech, and was so ataxic that he had to be supported. He was oriented and answered questions correctly when aroused. He had no delusions, hallucinations, signs of excitement or disorientation. At this time the sodium bromide medication was stopped. He was then observed for 41 days. During that time the blood bromine level gradually fell to a low point of 47 milligrams per cent. He continued to have moderate slurring of speech and unsteadiness of gait until the blood bromine content dropped to 121 milligrams per cent, which was 21 days after the drug was stopped. During this time the patient was not given any sodium chloride other than that he received in his routine hospital diet. At this last blood level all signs of bromide intoxication disappeared.

The nine additional cases of bromide intoxication produced followed the same general pattern as the two detailed above. In the entire series of 36 patients, the lowest level of blood bromine at which any patient developed the syndrome of intoxication was 195 milligrams per cent. Table



TABLE IV

Case Number	Sex	Age	Sodium Bromide Dose (grs. t. i. d.)	Serum Bromide Level at Which Toxic Signs Appeared	Highest Serum Bromide Level	Serum Bromide Level at Which Toxic Signs Disappeared	Bromide Reaction*	Admission Diagnosis
1	M	33	15		125		N	Neurolues—tabes
2	M	34	15		115		N	Neurolues—tabes
3	M	35	15		95		N	Neurolues—paresis
4	F	37	20		187		N	Neurolues—asymptomatic
5	F	23	20		217		N	Multiple sclerosis
6	F	15	20		177		N	Chorea
7	M	38	20		188		N	Neurolues—meningovascular
8	M	63	20		150		N	Arteriosclerosis
9	M	61	30		156		N	Arteriosclerosis
10	M	18	30		192		N	Neurolues—congenital—tabes
11	M	41	30		192		N	Psychoneurosis
12	M	30	30		214		N	Neurolues—meningovascular
13	M	53	30		218		N	Neurolues—tabes
14	M	64	40		165		N	Arteriosclerosis
15	M	30	40		183		N	Posttraumatic syndrome
16	M	38	50		212		N	Neurolues—meningovascular
17	M	23	30	224	306	121	I	Subarachnoid hemorrhage R.A.
18	M	45	30	200	239	156	I	Neurolues—tabes
19	M	33	30	222	293	?	I	Neurolues—tabes
20	F	64	30	239	256	?	I	Arteriosclerosis
21	M	39	30	253	332	150	I	Neurolues—tabes
22	F	27	30	289	308	69	I	Multiple sclerosis
23	F	43	30	200	228	114	I	Neurolues—meningovascular
24	M	34	40	195	243	118	I	Neurolues—meningovascular
25	M	64	40	198	228	144	I	Neurolues—meningovascular
26	F	13	50	319	429	200-250	I	Pseudo Tumor
27	M	33	50	220	299	139	I	Neurolues—meningovascular
28	F	45	30	240	284	112	P	Neurolues—asymptomatic and psychoneurosis
29	F	33	30	218	251	66	P	Psychoneurosis—severe
30	M	60	30	262	281	66	P	Arthritis—Psychoneurosis—Psychopathic personality
31	M	36	30	222	258	94	P	Psychopathic personality—Multiple sclerosis
32	M	50	30	245	331	147	P	Psychoneurosis
33	F	59	30	283	309	86	P	Psychoneurosis
34	M	39	40	240	284	101	P	Neurolues—tabes—Psychopathic personality
35	F	35	40	228	362	56	P	Psychopathic personality—Psychoneurosis
36	M	39	50	330	400	208	P	Psychopathic personality—Psychoneurosis

\*Bromide Reaction: N = None

I = Intoxication

P = Psychosis

IV shows all patients, individually, with the blood bromine level at which signs or symptoms of the toxicity first appeared, the highest blood bromine value obtained, and the blood bromine level at which the patient returned to his pre-bromide ingestion mental and physical state.

#### "BROMIDE PSYCHOSIS"

Much has been written about "bromide psychosis," and how to determine that diagnosis. Curran<sup>9</sup> believes that "one may observe distinctions

between an alcoholic psychosis and a bromide psychosis; for example, the objects hallucinated in bromide intoxication appear to be distant, the patient sees animals and figures on the ceiling, on the wall, or in the sky in contrast to the alcoholic hallucinations, in which the hallucinated objects appear in close proximity to the patient." Levin<sup>16</sup> differentiates bromide delirium and bromide hallucinosis. In the latter condition the patient hallucinates while fully oriented. He distin-

guishes a further state, namely, a paranoid episode with or without hallucinations. Diethelm<sup>13</sup> states that hallucinations of strangely colored objects are prominent. He also describes hallucinations of large animals and movements of the ceiling as rather typical. With these ideas and those of other authors in mind, the nine patients who developed "bromide psychosis" have been carefully observed. The clinical picture presented by these patients is that of bromide intoxication (previously described), plus disorientation, hallucinations, and delusions. The individual patient may be intermittently excited or quiet. He may show confabulation, or be asleep for long hours. He may have distant hallucinations or near ones, colored or uncolored ones, or at times none at all. With the hallucinations and delusions come the attendant excitement, outcries, misconceptions, and accusations which necessarily make any description of the patient an elastic one. He may be oriented for person and place one minute, and disoriented for the same modalities the next. There has been nothing diagnostically characteristic about the appearance of these patients; in short, they have presented the pleomorphic clinical picture of a state of toxic delirium. When attempting to describe a clinical picture which will include all nine patients, the aforementioned simple description is the only one that fits. Again two patients will be described in more detail as characteristic of this group.

Case 30: R.D., a white man sixty years of age, came into the hospital complaining of pain in both hands, pain and swelling in the left knee, and pain in both feet. On physical examination the positive observations were deformed tender hands, swollen left knee, and swollen tender ankles. In addition the patient had a long history of varied complaints and general inadequacy. He had drifted from job to job and had never been emotionally stable. A diagnosis was made of hypertrophic arthritis and psychopathic personality. The routine laboratory examination was negative. Roentgenograms of the hands, feet, and knees showed hypertrophic arthritis. Paraffin treatment was used on the patient's hands, and an elastic bandage was used on the left knee. After a week's initial observation the patient's sodium bromide medication was started. He was given 30 grains of the drug three times a day. This patient had no digestive upset while taking the drug; therefore, it was all retained. On the twenty-second day of bromide medication the patient showed increased daytime sleep. At that time the blood bromine level was 260 milligrams per cent. During the next three days the patient's clinical picture changed rapidly. He became disoriented, and had delusions and hallucinations. The blood bromine level was 281 milligrams per cent, and the total blood halide was 638 milligrams per cent giv-

ing a chloride displacement of 19 per cent. His speech and movements showed tremor. He tried to mail two letters by dropping them out the third floor window, and was halfway out himself when stopped by another patient. At times he was restless and easily irritated, and at other times he was excessively "dopey." Some questions and answers to and from the patient are listed below.

What kind of a place is this? "I am not running. Running—run around a hospital—don't know whether there is any trouble—just think it is trouble."

What is your name? Answered correctly.

What year is it? "I suppose it must be my breakfast."

What town is this? "Waterloo."

What is twelve times twelve? "Some of the towns have squares and some of them don't have squares. I know that we can make white. I have been watching him by having him watch me. I have been other places. The horses are coming Thursday."

Five days after the sodium bromide medications were stopped, the patient's blood bromine level was 192 milligrams per cent. He was completely disoriented, mumbled a great deal, answered imagined questions, and laughed in a silly fashion. Five days later the blood bromine level was 100 milligrams per cent, and the patient was oriented and quiet most of the time. However, he made the following statements about his wife who was one hundred miles away, "They have my wife down there on the streets. They have her dirty and won't let me see her—they won't let me see her—she is down there in a cool house. I can hear her on the street and I know her voice and I can hear her calling me. I don't know what to do about it." Fourteen days after the patient had received sodium bromide, he returned to his pre-bromide ingestion mental state. At that time his blood bromide level was 66 milligrams per cent.

Case 35: M.M., a woman thirty-five years of age, was admitted to the hospital complaining of having had rather frequent severe headaches for four years. She had had poor health all of her life. She had had a total of twelve operations for various complaints. She had been unable to hold a steady position because of her health, and had lived with her parents for eight years preceding her hospital visit. On physical examination the positive findings were 2+ photophobia and many healed surgical incisions. A diagnosis was made of migraine headache and constitutional inadequacy. The results of the laboratory tests were all within normal limits. After a ten-day period of observation, sodium bromide medication was started. She was given 40 grains of the drug three times a day. This patient ate and drank little, and at the end of five days of bromide ingestion the blood bromine level was 228 milligrams per cent. At that time she slept more than was normal for her, and had 1+ difficulty in controlling the finer movements of her hands. During the next six days the blood bromine level gradually rose to 362 milligrams per cent. At that time bromide medication was



stopped. The patient was ataxic, incontinent, disoriented, and had hallucinations and delusions. She talked in a rambling disconnected manner, laughed in a silly fashion, and carried on extended conversations with imaginary figures. Four days later the blood bromine level was 145 milligrams per cent, and her mental state was unchanged. During the next four days she gradually improved. Eight days after the bromide medication was stopped, the blood bromine level was 81 milligrams per cent. Her speech was still 1+ slurred, but her mental state was clear. Two days later, with a blood bromine level of 56 milligrams per cent, she showed no signs of bromide intoxication or psychosis.

The lowest blood bromine level at which any patient developed a "bromide psychosis" was 218 milligrams per cent. The highest at which symptoms initially appeared was 330 milligrams per cent. It has long been recognized that the height of the blood bromine level is not the only deciding factor in an individual patient as to whether he develops a bromide intoxication or a bromide psychosis. Jellinek<sup>2</sup> lists the authors who believe that bromide per se produces psychotic symptoms. However, a study of the literature shows that the data concerning any type of bromide intoxication in a given patient are generally inadequate, and particularly is this true of case reports labeled as being pure bromism. In contrast, numerous authors believe that the occurrence of "bromide psychosis" without the concurrent presence of tissue or psychopathology is extremely rare. Diethelm<sup>13</sup> says that bromism is a complex reaction, not a pure pattern due to the drug. Cuttino<sup>14</sup> has stressed the uncommon occurrence of pure bromism in the absence of psychopathic constitution. More recently Angyal<sup>17</sup> published a paper concerning predisposing factors in bromide intoxication in which he states, "Twenty-one consecutive patients admitted to the Worcester State Hospital during a five year period with a condition diagnosed as psychosis due to bromides were studied from the point of view of underlying gross predisposing factors." A careful study was made of the case histories of these patients with the idea in mind of determining what predisposing factors, if any, might be present in each case. "In 17 of the 21 patients severe and etiologically significant predisposing factors were present. These were: advanced arteriosclerosis, five patients; severe alcoholism, four patients; physical debility (infection, dehydration), two patients; and involuntal complications, four patients."

"The hypothesis is advanced that there is a synergistic relationship between the phenomena referable to bromide intoxication and the underlying *organic* lesions." A review of the etiologi-

cally significant predisposing factors listed in the paper makes us wonder at this conclusion. Four patients had no predisposing factors. Four patients were chronic alcoholics. No mention was made of the presence of any specific organic pathology in these patients, and we know of none characteristic of chronic alcoholism. Four patients had involuntal melancholia. Again, we know of no characteristic organic pathology present in this condition. One patient had syphilis. However, this diagnosis was made only on the basis of a positive Hinton test in the blood. The spinal fluid serology was negative, and no more details were given. Apparently the patient had none of the physical stigmata of cardiovascular, skin, bone, or neurosyphilis. Thirteen of the 21 cases, thus, have no recorded evidence of any gross pathology. The author explains that because of the nature of the study a thorough analysis of personality was impossible. A review of these case histories, as briefly summarized by Angyal,<sup>17</sup> shows that 14 of the patients had an out and out psychoneurosis or were psychopathic personalities. It is interesting to note that actually eight of the 21 patients had organic disease, 12 of them had no organic pathology (as recorded in the paper), and 14 were known to be psychoneurotic or psychopathic personalities. It would seem that a careful study of the past histories of the eight patients having organic disease would be of considerable interest. After careful analysis that paper still leaves unanswered the question as to why some patients develop only bromide intoxication, while others show the clinical picture of bromide psychosis.

Particular care has been exercised in reviewing the records of the nine patients in our series who developed "bromide psychosis." Reference to Table IV shows that each of these patients had either a psychoneurosis or psychopathic, inadequate personality. Four of them, also, had organic disease. Case number 28 was a forty-five year old woman who complained of headache, pain in the back, generalized weakness, fleeting pains in the chest, and dizziness. Her history was that of a psychoneurotic. She also had the physical and laboratory findings of a case of "burned out" tabes dorsalis. Case number 30 has previously been discussed in detail. Case number 31 was a thirty-six year old man with a fifteen year history of transitory complaints and general inadequate personality. He shifted from job to job, but never was quite able to adjust completely to his surroundings. Physical examination revealed the characteristic findings of moderately advanced multiple sclerosis. Case number 34 was a thirty-

nine year old man whose past history showed inability to adjust to his surroundings. He had repeated alcoholic bouts, had been divorced three times, and had never stayed on one job more than six months. He had the physical and laboratory findings of *tabes dorsalis*. While these four patients had organic disease, they also had unquestionable disturbances of personality. The remaining five cases of the group in whom "psychosis" was produced had no demonstrable organic disease.

At the same time that we have produced "bromide psychosis" in a group of patients with disorders of personality we have been unable to produce the syndrome in patients having a stable personality. As Table IV shows, blood bromine values of the patients having organic disease were carried to a consistently higher level than were those in the functional group. Severe bromide intoxication resulted in a number of cases, but without the addition of mental signs characteristic of the "bromide psychosis."

Final evaluation of the factors predisposing to "bromide psychosis" will probably come at some future date. The fact that all patients in whom we have produced this syndrome have had some disorder of personality seems significant. It goes far toward disproving the idea that organic disease is the most important predisposing factor in the production of "bromide psychosis." Certainly this question needs further study.

Angyal<sup>17</sup> discusses the fact that many of his patients became clear mentally with blood bromide levels far below the value obtained at the time of their admission to the hospital. He goes on to say that "this consideration appears significant in evaluating the various statements occurring in the literature with regard to the toxic level of bromides in the blood stream. The disagreement which exists on this point may be due, in part, to differences in the length of time elapsing between the discontinuance of bromide intake and the laboratory determination of the bromide level of the blood serum." Certainly there must be some explanation for the fact that there is such great variation of opinion between authors as to what is a toxic blood bromide level. By a toxic level we refer to the blood bromine value at which signs of intoxication first appear. Blood sodium bromide levels under 75 milligrams per cent frequently cause intoxication according to Curran.<sup>9</sup> Hanes and Yates<sup>10</sup> set the toxic level any place between 50 and 150 milligrams per cent of sodium bromide. Seventy-five milligrams per cent of sodium bromide is mentioned by Cuttino<sup>14</sup> as the amount sufficient to produce intoxication. It must

be remembered that these low figures represent the blood sodium bromide levels in isolated cases, several days after the bromide medication was stopped. They were not the amounts of bromine or sodium bromide present in the patient's blood at the time the clinical intoxication began. In no instance in the literature where extremely low values are reported as producing intoxication is this very important observation noted. Recently, Jellinek et al.<sup>2</sup> reported observations on 80 subjects receiving sodium bromide. According to Jellinek, "It may be stated definitely that in these normal subjects, at a fairly high serum bromide level between 120 and 200 milligrams per cent, no symptoms occurred which would have the slightest neurological signs of intoxication." In our own series, as previously noted, the lowest blood bromine level at which we have seen toxic signs is 195 milligrams per cent. This value is equal to a blood sodium bromide level of 253 milligrams per cent. Observations have been made on all of our experimentally produced bromism cases to determine the blood bromide level at which that patient returned to normal. Table IV records three blood bromine values for each patient: (1) the value at which signs of intoxication or psychosis first appeared, (2) the highest value obtained, and (3) the blood bromine value at which the patient returned to normal. This table shows how low the blood bromine level may fall before the syndrome of bromism disappears. These cases need not be reviewed in detail, but it is easy to see how M. M. (previously recorded) could be diagnosed as a case of "bromide psychosis" with a blood level of 75 milligrams per cent if she were examined several days after taking any bromide medication. At such a time her blood bromine level would actually have been far below the one needed to initiate her symptoms. Six of the 20 cases of bromism produced by us had a blood bromine level under 100 milligrams per cent at the time they returned to their pre-bromide ingestion mental state. It is altogether possible that many of the bromide intoxication and "bromide psychosis" cases reported in the literature, particularly those with suspiciously low blood bromide levels, have been seen for the first time by the reporting physician with the blood bromide levels far along the descending limb of the complete blood bromide curve.

Before patients having low serum bromide levels or severe organic disease are reported in the literature as examples of bromism, the diagnosis should be carefully checked. The criteria for making such a diagnosis have been discussed in another publication.<sup>15</sup> After such a patient has returned to normal, a simple method of verifying



the original diagnosis is to return the patient to bromide medication and determine the blood bromide level at which any symptoms or signs of intoxication reappear. Such a borderline case is described below:

D.K., a girl fifteen years of age, was admitted to the hospital with a diagnosis of Sydenham's chorea and bromide psychosis. No adequate history could be obtained. Physical examination showed that the patient was disoriented, excited, and had severe generalized choreiform activity. The blood bromine level was 132 milligrams per cent and the blood halide was 610 milligrams per cent, giving a chloride displacement of 9.5 per cent. Bromide levels were drawn frequently, and it was noted that the patient did not appear normal until a level of 54 milligrams per cent of blood bromine was reached. Her mental improvement exactly paralleled the improvement in the chorea. The patient was observed for several days and appeared normal. She was then given 60 grains of sodium bromine a day for 13 days. At the end of that time the blood bromide level was 177 milligrams per cent. There was no recurrence of any of the signs of bromide intoxication or psychosis. The patient was anxious to leave the hospital and was discharged. Since that time she has had two check-up examinations, and has stated that no untoward symptoms or signs developed after she left the hospital.

This case might easily have gotten into the literature as one of bromism, although the admission serum bromine level was only 132 milligrams per cent. We had previously seen this same mental reaction in uncomplicated chorea, and were immediately suspicious that bromides were not necessarily responsible for the patient's abnormal mental state. As noted, we were unable to reproduce any portion of the patient's abnormal mental state by raising the blood bromine level 45 milligrams per cent above the level present at the height of her symptoms. This case shows clearly how easy it would be, with inadequate data or diagnosis, to report 125 milligrams per cent or lower (depending on the time at which the patient was seen) as the level of bromide in the blood sufficient to cause intoxication.

Routine blood chloride determinations have been made along with the serum bromide determinations, and the values expressed as milli-equivalents of bromide and chloride. Using these figures the percentage replacement of chloride by bromide can be easily calculated. The minimum chloride replacement at which we have produced bromide intoxication is 23 per cent. The minimum chloride replacement at which we have produced bromide psychosis is 18 per cent.

Bromoderma was observed in four patients of the total series.

Studies have been made on the relationships

between total halide content of the blood, chloride intake and output, fluid intake and output, and halide excretion. These observations and conclusions will be published at a later date.

There was no evidence in any patient of the entire group of habituation or addiction to the drug. Most of the patients were happy when the "salty" medication was stopped.

#### SUMMARY

Thirty-six hospital patients have been given sodium bromide in varying doses over long periods of time.

Eleven patients developed the syndrome of bromide intoxication. This syndrome is characterized by the appearance of an increased desire to sleep, dulling of the higher mental functions, slurred speech, unsteady gait, and ultimately by clouding of consciousness. The lowest blood bromine level at which any patient developed bromide intoxication was 195 milligrams per cent. Eight patients first showed evidence of intoxication with blood bromine levels between 200 and 300 milligrams per cent. One patient exhibited toxic signs at a blood bromine level of 319 milligrams per cent.

A toxic delirium ("bromide psychosis") was produced in nine patients. This clinical picture consisted of the signs of bromide intoxication plus delusions, hallucinations, and disorientation. Signs such as crying, excitement, and confabulation developed secondary to the basic abnormalities. Eight of these patients had blood bromine levels between 200 and 300 milligrams per cent at the time they became psychotic. All of the patients who were made psychotic by the ingestion of sodium bromide had either a psychoneurosis or a psychopathic personality. We have been unable to produce this syndrome in any patient having a stable personality. We do not have any evidence to support the conclusion that organic disease is a *constant* predisposing factor in the production of bromism.

In most patients where bromism occurred there was a marked difference in the blood bromine level at which symptoms first appeared and the level at which the subject returned to normal. Thirteen of 20 bromism cases showed a difference of 100 milligrams per cent or more between these two levels. Six patients did not return to normal until their blood bromine levels had dropped below 100 milligrams per cent. The fact that some patients do not clear mentally from the effects of bromides until a low blood level is reached may explain the unusually low sodium bromide levels quoted by some authors as being toxic amounts of the drug.

Four patients developed a bromoderma while taking the drug.

None of the 36 patients studied showed any evidence of addiction or habituation to the drug.

In this series of 36 patients we have found that hospital patients do not develop signs of toxicity at serum bromine levels under 200 milligrams per cent (sodium bromide level of 259 milligrams per cent). The presence of an abnormal personality is apparently an important predisposing factor in the development of a "bromide psychosis," is not a primary psychosis, and the term toxic delirium due to bromides accurately describes the condition.

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#### FOOT DEFORMITIES CORRECTED BY RUBBER BAND TRACTION

Ross E. GUNN, M.D., Boone

Congenital malformations of the feet were known at least as far back as the first century.<sup>1</sup> They have been fairly common,<sup>2</sup> but are less so in this community since full employment and good wages have prevailed. Strictly preventive measures have never been generally applied. These deformities run more or less in families, frequently along with other malformations such as crowded teeth, overbite, cleft palate, and congenital heart disease. Intra-uterine pressure has been observed as one of the implementing mechanisms. The pathology is surprisingly reparable if treatment is begun early.

The ideal treatment begins in the first week of life;<sup>3</sup> it results in no atrophy, no shortening, allows full and free motion of the foot during cor-

rection, and brings about perfect form and perfect function.

Rubber band traction meets these requirements. It is easily applied. The crooked foot is pulled straight and is held until there is no tendency toward recurrence. The amount of tension required in the newborn is only a few ounces.

Thus far we have used adhesive plaster cuffs as anchors for the rubber. One is applied below the knee and the other around the foot. Perforated ears are provided on the cuffs in such a way that the applied bands aid the lengthened muscles, thus correcting the deformity. Traction usually achieves a correct position immediately, but must be maintained until there is no tendency toward recurrence. Heusner's glue<sup>3</sup> has been suggested as kinder to the skin than plaster, the formula of which is as follows: rosin, 50.0; alcohol 95%, 50.0; benzene, purified, 25.0; venice turpentine, 5.0. Powder the rosin. Mix with the alcohol in a bottle, mix benzene and venice turpentine in a graduate; then add to the rosin solution. Mix well.

The traction is easily increased or decreased according to the need at any time, which may be seen at a glance. Functions go unhindered. The infant kicks practically the same as if he were already normal. When there remains no tendency for the deformity to recur, the apparatus is easily removed. All patients on whom treatment was begun in the first week were cured with the exception of one infant whose mother failed to cooperate. This patient's fifth toe curls under (Case VII). One failure resulted because (1) treatment did not begin until the child was about a month old; and (2) the parents heard of a better doctor (Case I).

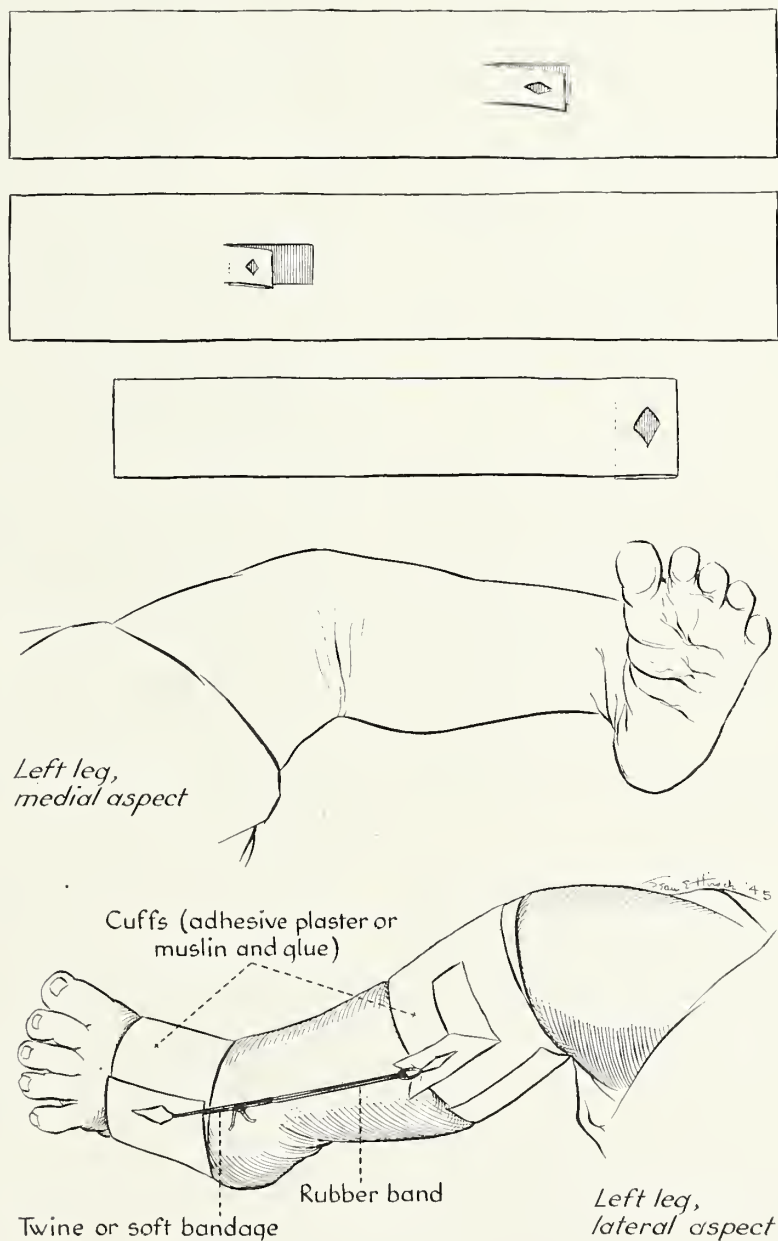
#### CASE REPORTS

Case I, R.J.F.—On July 26, 1927, there was born a seven and one-half pound son to healthy parents on a farm near Boone. His left foot was in complete talipes equinovarus with the inner border of the foot touching the inner side of leg above the ankle. Two days after birth a board splint was applied which corrected the deformity fairly well when first applied, but its use could not be continued because it was always wet and irritating. It occurred to me that rubber bands such as dentists use in orthodontia might be beneficial. On August 24, 1927, rubber bands were applied in line with the pull of the extensor digitorum longus and peroneus muscles by means of anchors of adhesive plaster to the foot, thigh, and knee. By September 17 the foot was in a practically normal position when dressings were in place. When they were loosened, 20 to 30 per



cent of the original deformity would recur. The parents removed the dressings because of skin irritation, insisting that they would wait until cooler weather for further correction. On October 13 they had a tenotomy done and a cast applied elsewhere. I saw the young man in his home

pounds, fourteen ounces, was born March 21, 1936, into a family of six children of healthy parents. He had slight talipes varus, right, and marked talipes varus, left. By April 10 correction was complete, except that mild traction by means of book bands was continued three more weeks to



November 25, 1943, when he was sixteen years of age. He was well and active, but had had to have the opposite leg shortened to level his pelvis. I am thoroughly convinced from succeeding experiences that if rubber bands had been continued the results would have been perfect.

Case II, R.D.C.—A male twin, weighing six

guard against recurrence. During June and July the infant had an attack of acrodynia and barely recovered. On April 3, 1943, he died of heart disease, which was considered congenital by physicians of the Children's Hospital at Iowa City. He died free of any foot deformity.

Case III, C.F.G.—A female infant, weighing

six pounds, was born November 26, 1936, with moderate talipes varus, right. Rubber band traction was applied at once. Correction was complete by February 1, 1937, and has remained so ever since. The mother has sent a photograph of the child about once a year and these show that the child has maintained perfect correction.

Case IV, S.J.B.—A female infant, weighing six pounds, was born June 1, 1937, with talipes calcaneus, bilateral, the great toes touching tibial tubercle areas. Rubber band traction brought about complete cure by June 29, 1937.

Case V, L.R.S.—A male infant, weighing six pounds, was born August 23, 1938, with moderate talipes varus, right. The infant was cured in two weeks by means of rubber band traction.

Case VI, P.A.B.—A six pound female infant was born November 8, 1939, with talipes calcaneovalgus, the great toes touching tibial tubercle areas. The child was completely cured by July 1, 1940.

Case VII, D.C.H.—A female infant, weighing six pounds four ounces, was born August 14, 1941, with talipes equinovarus, moderate degree, left foot. Correction began on about the third day of life. Attendance at the office was poor, but correction was fairly complete before the end of 1941. Full cooperation did not occur and treatment could not be continued for a sufficient length of time. This patient's fifth toe curls under slightly.

Case VIII, J.E.S.—A female infant, weighing six pounds eleven ounces, was born August 20, 1943, with talipes calcaneovalgus. Cure was completed by November 23, 1943.

#### COMMENT

Cases IV and VI are sisters, Cases V and VIII are brother and sister. Some of the parents still live in this community, and the others can be reached by mail. Members of the profession who wish to investigate any phase of these cases will be given as much aid as possible.

No recurrences have been noted in any of the last seven cases.

It was very noticeable that the average weight of these children was below normal. One of the fathers had club feet; and one of the mothers always had jaundice during pregnancy. Two were generally maladjusted in their marital life. One set of parents had some crowded teeth.

One could scarcely say that any one of these children did not deserve the blessing of good feet on which to make his journey through life.

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## EARLY DIAGNOSIS AND TREATMENT OF RHEUMATIC FEVER

JOHN L. KESTEL, M.D., Waterloo

Rheumatic fever is a lifelong disorder. An acute attack may be considered an active phase of a dormant or chronic state. Most rheumatic patients have minor manifestations or periodic symptoms, independent of the major attacks. There are obviously some who never have polyarthritides—only the late cardiac findings together with a careful history will reveal the actual disease process.

Difference of opinion exists as to the nature of rheumatic fever or the immediate cause of the acute attacks. It has generally been considered infectious, probably streptococcic, although sound bacteriologic evidence is lacking. Textbooks describe sore throat as a common early symptom of an attack of acute rheumatic fever. Opinions vary regarding the frequency of an initial tonsillitis, however; some authors maintain that it occurs almost always and others only occasionally, perhaps not more frequently than might be considered coincidental.

Demonstrable pathologic changes are chiefly carditis and arteritis. The endocardium or intima may be diffusely inflamed; inflammatory and degenerative changes occur in the myocardium or media; perivascular lymphocytic infiltration and fibrosis involve the adventitia and surrounding tissue. They are a combination of inflammatory and degenerative changes and shed no clear light on the etiology. Allergy has been considered; hypersensitiveness of the vascular system to bacterial toxins from some local infection is thought to be the cause of the reaction.

Recently the familial or hereditary factor has again been stressed. It has been suggested that the probability of an individual being rheumatic is consistent with recessive mendelian inheritance. Whatever the nature or true etiology may be, it is certain that some family groups are either affected or are highly susceptible, while others are free from the affliction or absolutely immune.

As one follows a youngster of a rheumatic family, suspected of being or becoming rheumatic, minor symptoms often will be apparent early in life. They reappear at intervals, generally reaching the most pronounced phase when the person is between ten and twenty years of age. Scarcely a year will pass without some symptoms, generally so slight that the individual does not remember them.

Joint pain is the most conspicuous early symptom. A knee or ankle will be painful on arising. This repeats itself, or shifts to another joint on



repetition. It may become more severe and persistent, and may be accompanied by slight elevation in temperature and excessive perspiration. Periodic elevation of temperature and increased fatigability may be the only symptoms for a time.

Attacks of precordial chest pain, either spontaneous or on exertion such as coughing, swallowing, or laughing, should be regarded with suspicion as a possible manifestation of subclinical carditis. Attacks of severe precordial pain resembling coronary disease have been described and observed, but they are usually milder and produce less shock than coronary occlusion. A pericardial friction rub may be heard after such attacks.

Transient pleurisy pains on either side of the chest which pass off in a few minutes are common. Occasionally they become persistent and constant, and a pleural friction rub and effusion follow. One instance of a youngster with pleural effusion is recalled in which the etiology could not be determined. It disappeared spontaneously, but a few weeks later the youngster developed shifting polyarthritis and pancarditis. Perhaps a simple effusion should be considered rheumatic as well as tuberculous until proved otherwise. Rheumatic pneumonia has also been described. It usually occurs in well developed cases, but should be suspected in potentially rheumatic individuals. The pathologic changes in the lungs are granulomas or "Masson bodies," which tend to produce stippling or mottling in the radiograph.

Gastro-intestinal symptoms are common, usually as stomach aches or side aches that have little relationship to food. More acute manifestations are sudden pain, cramps, and diarrhea. They may be mistaken for acute appendicitis or renal colic, but vomiting, leukocytosis or hematuria will be absent.

Symptoms of cerebral irritation may occur early. These are usually salivation, irritability, short periods of projectile vomiting, grimacing, mild choreiform movements, restlessness, and occasionally frank chorea. Actual rheumatic encephalitis is very rare; it was seen once by the writer during a severe attack of polyarthritis, and it was fatal.

Skin manifestations such as erythema, nodules, purpura, erythema nodosum and lupus erythematosus, which frequently are rheumatic in origin, will rarely be helpful in determining with certainty whether rheumatic activity is present.

The development of a murmur is of course evidence of carditis. Occasionally changes may be detected in the electrocardiogram when indefinite joint pains and fever are the only suspicious symptoms. The electrocardiographic observations are

the same as in frank carditis—delayed AV conduction, inversion of T waves, alterations of the QRS complexes, and elevation of the ST segments. A changing pattern on repeated electrocardiograms is particularly helpful when the abnormalities are minimal.

Many rheumatic individuals have secondary anemia. This usually coincides with other minor or major symptoms but sometimes is the sole finding. Nose bleeds are more common during these periods.

Overenthusiasm about making the diagnosis of subacute rheumatic fever must be avoided. If the individual is not of rheumatic stock, the possibility should be considered lightly. Only prolonged observation and careful evaluation of minor symptoms, often for several years, should make one fairly certain whether or not an individual is rheumatic. The sedimentation rate is valuable in determining whether rheumatic activity is present, but it is not specific. The "Mester test," which was originally described as specific for rheumatic fever, has not withstood subsequent investigation. Some clinicians insist on a major episode of polyarthritis or carditis before making a positive diagnosis; this is late in many instances if prevention of permanent damage is to be considered.

Exposure to cold is a great factor in precipitating severe attacks. These occur most frequently in late winter or spring. Presumably, prolonged cold eventually has its effect. Sometimes polyarthritis follows a single exposure, as after swimming in cold water or after a cold hunting trip. Acute rheumatic fever is most common in the Rocky Mountain areas and midwest and least common in the southern Atlantic states. A rheumatic patient should fare better in a milder climate. It is thought, however, that the carditis and vascular pathology may not be influenced as greatly as the joint pains. While much of the valvular damage occurs during severe attacks of polyarthritis, some endocardial, pericardial and vascular changes continue afterward or develop independently.

Maintenance of good general health and avoiding exposure to cold and infection are helpful prophylactic measures. A well balanced diet is essential. The average vitamin A level has been found to be reduced in rheumatic patients. Large doses of vitamin D have been reported as shortening the major attacks, but whether vitamin D will accomplish as much as tropical sunshine might be questioned. The anemia, when present, is responsive to iron. Consequently, iron should be given, although the hemoglobin will return to

normal spontaneously. A trip to a warm climate might prevent a major attack when subacute symptoms are threatening. Patients with mild rheumatic disease seem to improve readily in such a climate, more so than those who have severe arthritis or advanced carditis.

Medical treatment of the attacks is limited. Sulfonamides and penicillin have been found of little value. Many believe that the sulfa drugs are valuable as a preventive during tonsillitis, and their use is generally advised. Interest in the therapeutic value of the salicylates has been revived, since they tend to reduce the sedimentation rate. Their use when subacute symptoms are threatening is perhaps valuable. Large doses, however, have been found to prolong the prothrombin time and produce a hemorrhagic tendency, and so there is some risk with intensive salicylate therapy. The removal of tonsils does not reduce the recurrence of attacks materially, but the first attack is probably less frequent in individuals whose tonsils have been removed.

Small doses of x-ray therapy have been found to be beneficial in low grade carditis. In those with cardiac discomfort the pain will subside soon after beginning treatment. "Spray irradiation," or extremely small tonic doses of roentgen rays all over the body, has also been suggested, but conclusive results of this treatment have not been reported.

Since most rheumatic individuals have some carditis, it would seem best that they select an occupation which would subject them to the least physical exertion and the least exposure to cold.

While attacks of polyarthritis and carditis will occur without warning, there is reason to believe that their frequency might be reduced. It may also be hoped that the permanent cardiac damage might be minimized and that the accelerated arterosclerotic changes (with the secondary changes in the various organs) may be somewhat retarded.

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### CLINICOPATHOLOGIC CONFERENCE

#### LAENNEC'S CIRRHOSIS WITH PATENCY OF THE UMBILICAL VEIN

MAJOR JOSEPH E. FLYNN, M.C., A.U.S.

#### CASE REPORT

*Clinical History:* The patient, a white male, fifty-one years of age, entered the hospital on June 15, 1944. The chief complaints on admission were nausea, abdominal pain, and weakness. The present illness dated back to August 1943 at which time the patient noted "swelling" of the abdomen, followed a few days later by abdominal pain. He was able to take warm fluids only, since solid foods or cold fluids produced epigastric cramps. He described his stools as being watery and light brown in color. No blood or tarry appearance of the stools was ever noted. Although urinary frequency was experienced, the total output was diminished and the urine became dark. During the latter part of September, 1943, the patient developed dyspnea, slight nonproductive cough, and edema of the lower extremities. On October 6 he was admitted to a hospital. After admission an abdominal paracentesis was done weekly and an average of 6,000 cubic centimeters of ascitic fluid removed. By May 1944 he had improved sufficiently to return home. During May he came to the hospital at weekly intervals for removal of fluid from the peritoneal cavity. In June 1944 he experienced increased weakness, diminished urinary output, nausea, and pain over the entire abdomen. There was no history of jaundice.

*Past History:* The patient stated he had drunk a large amount of beer for many years but had abstained from strong spirits for the past ten years. He was a heavy smoker. He denied the use of drugs. He had had pneumonia in January 1942 and again in January 1943. In 1942 he had also had malaria and undulant fever, being hospitalized three and a half months for these two illnesses. He denied venereal disease.

*Physical Findings:* The skin and sclerae were white. The thorax was symmetrical with poor expansion. The lung fields were clear. The peripheral arteries were somewhat hardened. The

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blood pressure was 142/90. The heart was not enlarged. The cardiac rhythm was regular. No heart murmurs were heard. The abdomen was distended and tympanitic over the dome. There were numerous dilated abdominal subcutaneous veins. The percussion note was dull in the flanks and across the lower abdomen. There was marked tenderness over the entire abdomen but no sign of actual rigidity. There were numerous scars just below the umbilicus—sites of previous paracenteses. The anus and rectum were normal (no hemorrhoids). There was moderate generalized atrophy of the muscles. The nervous system was not remarkable.

*Roentgenologic and Laboratory Findings:* Gastro-intestinal roentgenographic studies were done. The only abnormality noted was displacement of the splenic flexure downward and medially, presumably by an enlarged spleen. Radiographs of the chest revealed the left half of the diaphragm to be elevated approximately two interspaces higher than normal. There was thickening of the pleura over the base of the left lung. The specific gravity of the ascitic fluid varied from 1.006 to 1.008. It contained from 15 to 500 white blood cells per cubic millimeter. Smears and cultures were negative. The blood nonprotein nitrogen varied from 50 to 42 milligrams per cent. The icteric index varied from 8.6 to 10. On a number of occasions a few casts were found in the urine. A photo-electric bilirubin determination taken on the day of admission was direct .574 milligrams and indirect .974 milligrams. Two days after admission the nonprotein nitrogen was 49 milligrams per cent and the urea nitrogen was 22.2 milligrams per cent. Two days before his death the blood protein was 5.72 grams per cent. On admission the red blood cell count was 3,800,000. The white blood cell count was 32,000 with neutrophils 87 per cent, lymphocytes 12 per cent, monocytes 1 per cent. The hemoglobin was 12 grams. On June 24 the red blood cell count was 4,680,000, the white blood cell count 26,300 with neutrophils 87 per cent, lymphocytes 13 per cent, and hemoglobin 12.5 grams. On the same day the blood nonprotein nitrogen was 106 milligrams per cent and the icteric index was 9.3.

*Progress:* On admission the patient was given 1,000 cubic centimeters of saline and glucose. Following this he was improved subjectively. The next day he was given 25 grams of serum albumin intravenously. Later an abdominal paracentesis was done. He was started on 5 grains of ammonium chloride three times a day and given 1 cubic centimeter of mercupurin intramuscularly. On June 21 another abdominal paracentesis was done and 5,900 cubic centimeters of straw-colored fluid

removed. Following the removal of the fluid the patient complained of pain in the abdomen and inability to urinate. He was given 2 cubic centimeters of mercupurin intramuscularly. On June 23 the patient was given 25 grams of serum albumin intravenously. Later he was given 1,000 cubic centimeters of 5 per cent glucose intravenously. The afternoon of the same day he complained of being drowsy and continued to have pain in the abdomen, which became increasingly severe. The morning of June 24 he became comatose. On that date the blood pressure was 110/70, the pulse 96, the respirations 14, and the temperature 98.6. The lungs were clear. The heart was normal. The coma gradually deepened during the night and about midnight moist râles became evident throughout the lung fields. Respirations became noisy and labored. The pulse became more and more thready. The patient expired June 25, 1944.

#### *Clinical Diagnoses:*

1. Cirrhosis, portal, severe, cause undetermined.
2. Ascites, severe, secondary to No. 1.
3. Pleuritic adhesions, chronic, left base, cause undetermined.

#### NECROPSY ABSTRACT

The peritoneal cavity contained 5,000 cubic centimeters of cloudy fluid. The blood culture and ascitic fluid both yielded a pure culture of hemolytic staphylococcus. The liver weighed 1,620 grams. It was light yellow in color. It presented a nodular appearance. The nodules were small, yellowish brown in color and separated by narrow depressed zones of grayish white tissue. The portal vein was dilated. The left branch of the portal vein communicated with a patent umbilical vein whereby blood during life was shunted from the left portal vein to the abdominal subcutaneous veins.

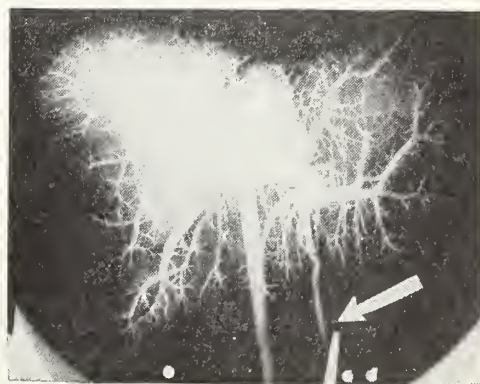


Fig. 1. Photograph of a postmortem roentgenogram of the liver taken after the portal venous system was filled with radiopaque material. The arrow indicates the patent umbilical vein whereby blood during life was shunted from the left portal vein to the abdominal subcutaneous veins.

meters of water. On injecting the vein the dye flowed freely from the patent umbilical vein. It was therefore necessary to clamp the cut portion of the umbilical vein. After the injection a roentgenogram was taken of the liver (Fig. 1). Proximally the patent umbilical vein communicated with the subcutaneous veins in the region of the umbilicus. The diameter of the umbilical vein was 10 millimeters. In several places along the

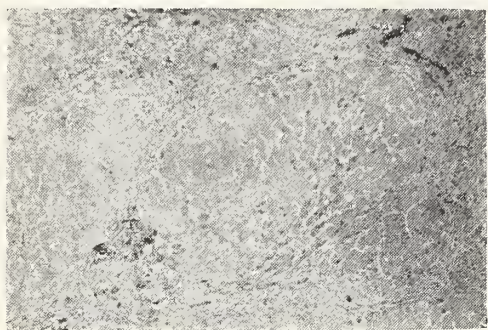


Fig. 2. Photomicrograph of the liver showing the typical Laënnec's cirrhosis.

course of the umbilical vein were small branches which when probed likewise communicated with the abdominal subcutaneous veins. The spleen was enlarged, weighing 500 grams. On section the pulp was reddish gray in color and firm. There was an acute peritonitis.

Microscopically, the architecture of the liver was greatly altered, presenting the typical appearance of Laënnec's cirrhosis (Fig. 2). The lobules varied considerably in size and shape and in most cases had no definite relationship to the periportal structures and central veins. Most of the lobules were surrounded by connective tissue. The connective tissue contained scattered lymphocytes and proliferating biliary ductal epithelium. A cross section of the umbilical vein (Fig. 3) revealed some of the radiopaque material injected into the portal vein to adhere to the intima. The walls of the veins contained only a minimal amount of smooth muscle. The peritoneum included with the um-



Fig. 3. Photomicrograph of the para-umbilical abdominal wall showing the patency of the umbilical vein.

bilical vein exhibited a marked inflammatory reaction secondary to the generalized peritonitis. The subcutaneous veins also contained radiopaque material indicating communication between them and the umbilical vein.

#### *Anatomic Diagnoses:*

1. Cirrhosis, Laënnec's type, advanced.
2. Patency and dilation, umbilical vein, with communication between left branch of portal vein and para-umbilical subcutaneous veins.
3. Varices, esophageal and diaphragmatic, moderate, secondary to portal hypertension.
4. Pneumonia, lobular, terminal, bilateral, severe.
5. Ascites, marked.
6. Splenomegaly, marked.
7. Peritonitis, generalized, acute (hemolytic staphylococcal).
8. Septicemia, hemolytic staphylococcal, secondary to peritonitis.
9. Arteriosclerosis, heart, spleen, pancreas, aorta.
10. Arteriolosclerosis, spleen, periaörenal connective tissue.
11. Compression and herniation, fourth lumbar intervertebral disk.
12. Pleuritis, subacute and chronic, bilateral, moderate.
13. Dilation, portal vein.
14. Distention, urinary bladder, marked.

#### COMMENT

The generalized peritonitis was unquestionably exogenous and related to the multiple abdominal paracenteses. The septicemia was secondary to the peritonitis. Armstrong et al<sup>1</sup> emphasize that portal hypertension associated with patency of the umbilical vein produces a characteristic venous murmur in the region of the umbilicus or epigastrium by virtue of the collateral circulation between the umbilical vein and the abdominal subcutaneous veins. In this case the clinical record contained no indication that an umbilical auscultatory examination had been done.

#### DISCUSSION

After birth the umbilical vein, which returns the blood from the placenta to the portal vein of the liver, normally obliterates with the formation of a fibrous cord called the ligamentum teres hepatis. In 1852 and 1908 Cruveilhier and Baumgarten, respectively, reported a case in which the liver was smaller than normal and the umbilical vein was patent. Cruveilhier postulated that the shunt of blood from the portal circulation to the systemic circulation resulted in hepatic atrophy. Baumgarten likewise predicated that the hypoplasia of the liver was probably secondary to the



umbilical vein patency. Later the term Cruveilhier-Baumgarten cirrhosis became applied to cases in which there was cirrhosis of the liver with patency of the umbilical vein. In 1942 Armstrong and others<sup>1</sup> ably reviewed the literature. These authors suggested that the term Cruveilhier-Baumgarten syndrome be applied to cases presenting splenomegaly, dilated thoraco-abdominal veins, and an umbilical or epigastric venous murmur and thrill, whereas the term Cruveilhier-Baumgarten disease be applied to cases of hepatic atrophy associated with patency of the umbilical vein. In the case reported, typical cirrhosis of Laënnec's type was present. Despite the natural shunt of blood from the portal vein to the systemic venous system, ascites, portal vein dilatation and esophageal varices still developed. This case indicates the futility of omentopexy or modified Eck-fistulas in the treatment of hepatic cirrhosis.

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### REFRESHER COURSE FOR SERVICE PHYSICIANS

Under the sponsorship of the Polk County Medical Society, a refresher course at Broadlawns General Hospital in Des Moines is now available to any interested physicians. This course has been approved by the American Medical Association and the Iowa State Department of Public Instruction.

It is desired that the first course commence on February 11, and continue for two weeks, ending Saturday, February 23. There are facilities for fourteen men who will be assigned rooms at the hospital for the two week period, with the only expense involved being that of a reasonable charge for meals consumed at the hospital.

This refresher course is designed to cover all medical subjects, including surgical specialties, and is particularly adapted to meet the requirements of the general practitioner. Actual patients in the hospital will be used as teaching material, and didactic lectures will be given each morning. The afternoon will be free for work in the hospital, or to allow sufficient time for the men to visit the State Medical Library if special reading is desired. The teaching staff is prepared to start work on February 11, and it is therefore requested that all interested physicians, whether returning servicemen or men who have remained in civilian practice, notify Mr. Ed Kingery, Executive Secretary, Polk County Medical Society, 721 Bankers Trust Building, Des Moines 9, Iowa, in order that they may be registered for the course. If the demand exceeds the maximum of fourteen physicians, the course will be repeated until all interested men have been accommodated.

### NATIONAL CONFERENCE ON MEDICAL SERVICE IN CHICAGO FEBRUARY 10

The nineteenth annual meeting of the National Conference on Medical Service will be held Sunday, February 10, at the Palmer House in Chicago and all members are invited to attend. Following is the program:

#### Morning Session—9:00 o'clock

President's Address, Medicine and the National Crisis, C. L. Palmer, M.D., Pittsburgh

What Labor Expects from Medicine, Walter Reuther, Vice President, United Auto Workers, CIO, Detroit

What the Farmer Expects from Medicine, J. S. Jones, Secretary, Minnesota Farm Bureau Federation, and Chairman, National Committee for Rural Health, St. Paul

Discussion, Leonard W. Larson, M.D., Member of Committee on Rural Medical Care, American Medical Association, Bismarck, N. D.

What Industry Expects from Medicine, Howard Strong, Secretary, Health Advisory Council, Chamber of Commerce of the United States, Washington, D. C.

#### Afternoon Session—1:45 o'clock

Medical Care of Veterans, Major General Paul R. Hawley, Acting Surgeon General, Veterans Administration, Washington, D. C.

Aims and Purposes of Conference of Presidents and Other Officers of State Medical Societies, Andrew S. Brunk, M.D., President of "Conference of Presidents and Other Officers of State Medical Societies," Detroit

What About Returning Medical Officers?

Postgraduate Opportunities, Victor S. Johnson, M.D., Secretary, Council on Medical Education and Hospitals, American Medical Association, Chicago

Establishment of State Bureaus of Information, Mrs. M. Virginia Shuler, Supervisor, Bureau of Information, American Medical Association, Chicago

Medical Legislation, J. W. Holloway, Jr., Director, Bureau of Legal Medicine and Legislation, American Medical Association, Chicago

National Plan for Volunteer Prepayment Medical Care, Jay C. Ketchum, Executive Vice President, Michigan Medical Service, Detroit.

### HOBBY SHOW BY SERVICEMEN

A hobby show, comprised of hobbies developed by physicians during their years of military service, is being planned for the state meeting. The central office has tried to write every returning physician about it, but if you did not receive your letter, and have something you would like to exhibit, please write the central office.

# STATE DEPARTMENT OF HEALTH



## SURPLUS PLASMA THROUGH THE AMERICAN RED CROSS

During the last week of December 1945, the Department received from G. Foard McGinnes, M.D., National Medical Director, The American Red Cross, a letter pertaining to the distribution of dried plasma recently declared surplus by the Army and Navy. The plan as outlined was printed in the December 29 issue of *The Journal of the American Medical Association*, page 1275.

Announcement of the plan reads in part as follows:

The surplus dried plasma amounts to about one and a quarter million packages, which it is estimated will meet civilian needs for approximately two years.

The State Department of Health is to:

1. Assume the responsibility for making an inventory of the plasma received so that it may be issued in time to insure its use before it becomes outdated. This is necessary because the surplus plasma is made up of lots bearing different expiration dates.

2. Agree to affix to each individual package prior to distribution a special label, to be provided by the American Red Cross, bearing substantially the following statement: "This plasma, having been declared surplus to the needs of the armed forces, is made available by the American Red Cross without charge for civilian use." Space will be provided on the label for the department of health to add its name as the distributing agency.

3. Make the plasma available to all physicians licensed to practice medicine and surgery and to all acceptable hospitals for administering to any patient without charge to physician, hospital, or patient either for the product or for the cost of shipment.

4. Encourage proper use of the plasma by all available means and maintain a record of its distribution.

5. Issue and disseminate information relative to the use of blood and blood derivatives to the medical profession and the public.

6. Conduct the distribution of plasma, in consultation with the area office, and direct the attendant publicity in such a way as to provide for participation of the Red Cross chapter in the local program in accordance with the provisions set forth in Section VI below.

7. Submit periodic reports to the area medical director on the status of the program. These reports

should include a monthly record of the amount of plasma distributed, the amount of the reserve supply, and copies of publicity, directives, and other material pertinent to the program.

The American Red Cross is arranging for distribution of plasma in five areas of the United States. Centers for distribution are New York City; Alexandria, Virginia; Atlanta, Georgia; St. Louis, and San Francisco. Raymond F. Barnes, M.D., is Regional Director of the American Red Cross in the Midwestern Area; his address is 1709 Washington Avenue, St. Louis 3, Missouri.

## ADVISORY COMMITTEES

Two committees have been appointed to advise with the State Department of Health relative to distribution and use of plasma in cooperation with The American Red Cross. Members of the committee representing the Iowa State Medical Society are: John C. Parsons, M.D., Des Moines; John W. Billingsley, M.D., Newton; and R. C. Gutch, M.D., Chariton. Members of the Committee appointed to represent the Iowa Hospital Association include: R. A. Nettleton, Iowa Methodist Hospital, Des Moines; Paul Hansen, Iowa Lutheran Hospital, Des Moines; Dorothea Ely, Jennie Edmundson Memorial Hospital, Council Bluffs; and Leona Nelson, Finley Hospital, Dubuque.

## DISTRIBUTION

Following is a copy of Dr. Bierring's letter to superintendents and staff physicians of Iowa hospitals regarding the distribution of dried plasma in cooperation with The American Red Cross:

This letter follows the recent announcement by the American Red Cross regarding distribution of plasma declared surplus by the Army and Navy.

The plan for distribution and use of the surplus plasma, to quote the medical director of the American Red Cross, "has been presented to and concurred in, by the Association of State and Territorial Health Officers, the American Medical Association and the American Hospital Association. To advise with the Department regarding distribution and use of plasma, the following have been appointed as a committee representing the Iowa State Medical Society: John C. Parsons, M.D., Des Moines; John W. Billingsley, M.D., Newton, and R. C. Gutch, M.D., Chariton. Members of a committee appointed to represent the



Iowa Hospital Association are R. A. Nettleton, Des Moines; Paul Hansen, Des Moines; Dorothea Ely, Council Bluffs, and Leona Nelson, Dubuque.

According to the plan of the American Red Cross, 5,535 packages or units of dried plasma will be assigned to Iowa in the near future. The allotment is based on one unit of plasma for each physician in the community, one unit for every four hospital beds, plus an additional 10 per cent to insure enough plasma to last for three months. Each unit will be ready for administration, with directions for use.

Since it has been derived from blood contributed by Americans for the Armed Forces, it is understood that the plasma is to be distributed, "without charge to all physicians licensed to practice medicine and surgery and to all acceptable hospitals for use in the treatment of any patient without charge for the product."

The State Department of Health has designated your hospital a distributing center for plasma to be used for patients and furnished to physicians; packages of the blood element as above outlined will be forwarded to the hospital as soon as shipment is received in Des Moines. It is requested that the hospital assume responsibility for the following:

1. Provide satisfactory storage for the dried plasma, remembering that the temperature must not be allowed to go below 35° F. or above 120° F.

2. Keep record of each patient who receives plasma and the amount used.

3. Keep record of the names of physicians to whom units of plasma are supplied.

4. Insofar as practicable, assist the Serum-Plasma Center of the State Department of Health with the assembling of completed case reports, particularly those in which use of plasma was apparently of special value or significance.

5. On or near the first of each month, mail to the Serum-Plasma Center, Iowa State Department of Health, the case report forms that were attached to the plasma units as used during the preceding month, including (a) the patient's name and address, (b) amount of plasma administered, (c) physician's name and address and (d) when practicable, more detailed information as stated in paragraph 4.

It is believed that physicians will want to take full advantage of this unusual opportunity to use plasma.

#### SHORTENED PERIOD FOR SCARLET FEVER

The following announcement pertaining to isolation for scarlet fever and related streptococcal infections was prepared for release January 12 and was mailed to all county auditors and local boards of health of Iowa:

Two changes affecting the administrative control of scarlet fever and closely allied upper respiratory infections have been incorporated in the Rules and Regulations of the Iowa State Department of Health. One modification reduces the minimum period of isolation for scarlet fever, the other places certain upper

respiratory conditions in the same category with scarlet fever.

It is significant that the 6th edition of the bulletin entitled "The Control of Communicable Diseases" revised in 1945, places Streptococcal Sore Throat, Streptococcal Nasopharyngitis, Streptococcal Tonsillitis and "Septic Sore Throat" in the same classification with scarlet fever. All of these conditions are now regarded as having as a common etiologic agent one or other strain of *Streptococcus hemolyticus*. The bulletin also reduces the period of isolation of the uncomplicated case of scarlet fever to fourteen days.

The above mentioned bulletin, published by the American Public Health Association, is official with the U. S. Public Health Service, the U. S. Navy, and has been approved in principle by the Surgeon General, U. S. Army.

The State Board of Health, Advisory Body to the State Department of Health, at its meeting on Tuesday, January 8, 1946, approved the following steps:

1. That the period of isolation for the uncomplicated case of scarlet fever be a minimum of 14 days from the onset of the disease.

2. That the period of isolation or segregation for Septic Sore Throat, Streptococcal Sore Throat, Streptococcal Nasopharyngitis and Streptococcal Tonsillitis, "whether in the home or hospital, should be determined on the basis of the clinical course of the infection. In uncomplicated cases the period of communicability should be completed within 14 days."

3. That the period of isolation as specified in paragraphs (1) and (2) be adopted as part of the Rules and Regulations of the Iowa State Department of Health.

4. That the changes in the isolation period for Scarlet Fever and related Streptococcal Infections become effective January 15, 1946.

#### MORBIDITY REPORT

Disease	Dec. '45	Nov. '45	Dec. '44	Most Cases Reported From
Diphtheria	31	74	28	Cerro Gordo, Woodbury, Clinton
Scarlet Fever	138	229	220	Polk, Dubuque, Washington
Typhoid Fever	0	4	0	None
Smallpox	1	0	0	Clinton
Measles	19	18	75	Pottawattamie, Calhoun, Carroll
Whooping Cough	28	39	25	Pottawattamie, Woodbury, Washington
Brucellosis	0	*249	13	None
Chickenpox	159	204	216	Johnson, Story, Black Hawk
German Measles	4	2	2	Boone
Influenza	649	8	0	Mahaska, Cedar, Allamakee
Malaria	28	19	10	Polk, Butler, Bremer
Meningococcus Meningitis	14	8	7	Guthrie, Lee, Appanoose
Mumps	79	170	127	Des Moines, Woodbury, Story
Pneumonia	†521	14	32	Polk, Clinton, Linn
Poliomylitis	6	42	6	Scott, Bremer, Kossuth
Tuberculosis	34	50	49	For the State
Gonorrhea	182	243	171	For the State
Syphilis	115	126	122	For the State

\*246 of the 249 brucellosis reports are delayed reports from attending physicians in response to follow-up of agglutination reports as notified from the Department's State Hygienic Laboratory.

†507 of the 521 cases represent reports from Iowa hospitals for the period July-December, 1945.

# The JOURNAL of the Iowa State Medical Society

ISSUED MONTHLY

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 EVERETT M. GEORGE, Editor.....Des Moines

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**EDITORIAL BOARD**

The Publication Committee is pleased to announce that Drs. John W. Dulin of Iowa City, Horace M. Korn of Dubuque, and Ernest E. Shaw of Indianola have agreed to serve as an Editorial Board to aid the editor in the publication of the JOURNAL. We are happy to receive the assistance of these physicians in maintaining the standards of this publication.

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**BIOLOGIC FALSE POSITIVE SEROLOGIC TESTS**

It is anticipated that false positive serologic tests among returning service men and women, many of whom have had a tropical disease or have been given influenza vaccine, will appear more frequently than in civilian personnel. With increased use of serodiagnostic tests in premarital, prenatal, and preemployment examinations, false positive tests are of paramount importance. These false tests are likely to lead to errors in diagnosis, to stigma of innocent persons, and to the use of long treatment for a disease which does not exist. Beerman, in an excellent review of the entire subject in the April and October issues of *The American Journal of Medical Science*, shows that there are many diseases other than malaria and yellow fever which can result in a false positive test. The medical departments of the Army and Navy have repeatedly cautioned their medical officers against making the diagnosis of syphilis on the basis of one test. Attention should also be called to Stokes' statement that one positive test is not an adequate reason for a positive diagnosis of syphilis. The general practitioner will see an increasing

number of men and women who have a positive test, and it will be his responsibility to evaluate and diagnose the disease.

The laboratory can report only what it sees take place in a test tube. The reagin is not specific for syphilis, but depends on some alteration of the serum protein. This alteration may be the result of many infectious processes, and until such time that there is a specific reagin, confirmatory tests will continue to be necessary.

Hence, the obvious conclusion remains that a careful history and diligent physical examination continue to be the chief aids in making a proper diagnosis. Confirmatory tests should be run on all doubtful or initially positive tests. Repetition of the test using different laboratories will often aid. The lapse of time, one to two months, which will not endanger the course of the disease if it is syphilis, will in most cases allow for a more accurate evaluation of the laboratory test.

May we repeat for the sake of emphasis that one positive test is not an absolute indication of syphilis, and that before lengthy treatment is begun the diagnosis should be confirmed by other laboratory tests and by the somewhat old-fashioned, but nevertheless extremely useful, complete history and physical examination.

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**ARMED SERVICES AMPUTATION PROGRAM**

There have been approximately 15,000 amputations performed by the Medical Corps of the Army and Navy upon casualties during World War II. With such a large number of people involved, criticism of the handling of these patients is naturally bound to arise. If the physicians of Iowa have not had personal knowledge of criticism of the treatment of these men, it is quite possible that such may arise in the future. To offset disparaging reports the Army requested a group of civilian consultants, consisting of Dr. Paul B. Magnuson, Associate Professor of Surgery at Northwestern University Medical School, Dr. Philip D. Wilson, Clinical Professor of Orthopedic Surgery at Columbia University College of Physicians and Surgeons, and Dr. Harold Conn, orthopedic specialist of Akron, Ohio, to investigate the six amputation centers of the Army. These consultants made a thorough survey and were sufficiently impressed with their findings to feel that exceptional commendation was due the Surgeon General and the Medical Department of the Army for having successfully handled an emergency problem which had never been encountered previously in modern times.

The surgical treatment of amputees revealed a higher standard of surgical skill due to the establishment of amputation centers. Physical ther-



apy, occupational therapy, training and reconditioning are all emphasized at these centers. Such a program is also carried out by the Navy Medical Corps. In the amputation center at the U. S. Naval Hospital, Mare Island, California, this rehabilitation program is not considered complete until the amputee has been able to secure a good job in his chosen field with reasonable expectation of permanency.

All amputation centers of the Army and Navy have carried out research in the manufacture and fitting of the prostheses. Considerable advance has been made in the use of plastics with the hope that a lighter limb may be developed. There is an advantage in the use of plastic material in that it may be better molded to the amputation stump than was previously possible with the use of the customary willow wood. The use of a prosthesis for the upper extremity still leaves much to be desired. The Becker, "Miracle," and Trautman hands possess certain features which have some advantage, but all are too heavy and none can actually reproduce normal hand function. Hooks of the Dorrance and "Locktite" type still remain instruments of greater utility to the amputee but have the distinct disadvantage of their appearance when the patient is not working. The limb shops of both the Army and the Navy are well equipped, compare favorably with the best civilian shops, and are able to produce an adequate number of limbs with excellent workmanship.

Although there may be a few patients who feel their rehabilitation has been neglected, it should be pointed out that a sincere attempt has been made by both the Army and the Navy to equip the amputee with a serviceable and efficient prosthesis. Furthermore, the rehabilitation program has been designed to equip the individual patient so that he may carry out an occupation of his choice which will furnish him with an adequate income. Proper understanding of the magnitude of this problem should do much to eliminate unwarranted criticism of the amputation program as carried out by both the Army and the Navy.

#### IOWA MEDICAL SERVICE

Iowa Medical Service continues to grow. A total of 573 Iowa physicians are now participating and 3,221 persons are covered by the service. In the past two months 2,320 persons (seven groups) have been enrolled, indicating the favor with which the plan is being received by both employer and employee. Two other firms are being enrolled at present, and they will materially increase the number covered. Four claims, amounting to \$154.00, have been paid and six are pending.

All of these figures indicate a slow, steady

growth of the plan. This is what the State Society desired in its original thinking, because those who had studied the problem felt it would be best to grow slowly and gain experience and knowledge before aspiring to great volume. The plan must be sound if it is to endure, and while the number of physicians enrolled is somewhat smaller than had been hoped, it will undoubtedly increase as they see its value not only to them but more particularly to their patients.

It is again recommended that all physicians who have not studied this service really take the time to consider seriously the results of such a plan in the state of Iowa.

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#### THE VOCATIONAL REHABILITATION PROGRAM

Many physicians in Iowa are not familiar with the purposes and provisions of the vocational rehabilitation program which is being carried out in Iowa. This program for *civilian* vocational rehabilitation was made possible by the passage of the Barden-LaFollette Act on July 6, 1943, and it is probable that the great need for more war workers played a large part in its passage. Immediate objectives of the Office of Vocational Rehabilitation after its creation were to guide disabled manpower into war production and essential business, and to provide a comprehensive service to enable the handicapped to prepare for and secure employment in peacetime pursuits. The program provides various types of services for persons handicapped from any cause (accident, disease, or congenital defect) to make them capable of remunerative employment, or able to be employed more advantageously on a normal competitive basis. The physical restoration services are expected to remove substantially, or to eliminate, the employment handicap.

The Act provides free physical examination, counseling, training, and placement. The physician is paid for the physical examination and is asked to make a careful examination to determine whether or not the handicap is one that may be remedied so as to make the individual capable of being employed. In other words, he passes upon the eligibility of the individual for care under the physical restoration part of the program.

When the individual is found eligible, he helps to pay for the medical treatment, hospitalization, prosthetic appliances, etc., if he is able. If he cannot pay for them, they are provided to him free of charge.

A word about the administration of the program may be in order. It is a Federal-State project, with the Federal Government assuming all State administrative costs, including those for vocational

guidance and counseling. The costs for medical diagnosis and treatment, prevocational and vocational training, and other similar services are shared equally by State and Federal Government, while the cost of service for war-disabled civilians is borne entirely by the Federal Government.

In Iowa a special advisory committee of physicians has been appointed and is working with the Office of Vocational Rehabilitation. The schedule of benefits of Iowa Medical Service has been adopted for remuneration of physicians for work done under the program. Three hundred thirty persons in the state were rehabilitated and placed in employment between July 1, 1943, and June 30, 1944.

Figures for the country as a whole are interesting. In that same period 41,490 persons were rehabilitated and placed in employment. Of these, 22.9 per cent, or 10,076 had never worked; and 88.8 per cent, or 39,072 were not working at the beginning of the rehabilitation period. Earnings of the group as a whole rose after completion of the rehabilitating process to \$6,482,225 a month—more than twelve times their previous earnings. The average expenditure by State agencies for completing the rehabilitation process for one person was \$146.91 in the fiscal year ended June, 1944. This cost may be increased in the future by altered training conditions and more extensive physical restoration services, but the office of Vocational Rehabilitation does not anticipate that the average cost of restoring a disabled person to employment will exceed the cost of maintenance for one year at public expense, and furthermore, vocational rehabilitation is a nonrecurring expense. Once rehabilitated, the individual should be capable of supporting himself.

Types of disability for this same period were as follows: Orthopedic, 15,592; poliomyelitis, 3,237; cerebral palsy, 387; tuberculosis (pulmonary), 2,668; cardiac, 2,158; hernia, 1,088; arthritis, 761; diabetes, 199; blind, 1,112; defective vision, 2,253; one eye, 1,720; deaf, 577; deaf mute, 746; hard of hearing, 2,494; speech defect, 309; other types of physical disabilities, 5,129; and mental cases, 760.

Vocational rehabilitation of veterans is provided for under another law, but veterans are accepted under the civilian program if their disabilities are adjudged by the Veterans Administration not to be service-connected, or if they elect to come under the program as a civilian.

A sectional meeting of the American College of Surgeons will be held Thursday, January 31, and Friday, February 1, at Hotel Jefferson in St. Louis, Missouri.

## VETERANS ADMINISTRATION PROGRAM

### CORRECTION OF STATEMENT IN GENERAL HAWLEY'S TALK

The December 1945 issue of the JOURNAL OF THE IOWA STATE MEDICAL SOCIETY carried a summary of a talk given in October by Major General Paul R. Hawley. General Hawley's statement read: "At the moment all women veterans are entitled to outpatient care at whatever expense for any disability, service connected or non-service connected."

According to Lt. Col. L. M. Maguire, M.C., Chief Medical Officer of the Veterans Administration in Des Moines, this is incorrect. Women veterans are entitled to outpatient care for service-connected disabilities only, just the same as male veterans. The JOURNAL wishes to make this correction so that there will be no misunderstanding on this point.

### DEPARTMENT OF MEDICINE AND SURGERY IN THE VETERANS ADMINISTRATION

The JOURNAL is pleased to publish for the information of its readers the following report from the Washington office of the Council on Medical Service and Public Relations regarding the new Department of Medicine and Surgery in the Veterans Administration:

With the signing of H. R. 4717 by the President, now Public Law 293, there was created in the Veterans Administration a Department of Medicine and Surgery under a Chief Medical Director. General Bradley announces that he has designated General Paul R. Hawley to serve as Acting Chief Medical Director. This act will bring professional personnel into an organization comparable with the Army and Navy Medical Corps and the U. S. Public Health Service.

General Bradley immediately authorized the employment of physicians, nurses and dentists to fill existing vacancies. There is an immediate need for 1,125 doctors, 1,200 nurses and 100 dentists.

Among the major provisions are:

1. Specialists certified by VA will be paid 25 per cent more salary up to a ceiling limit of \$11,000 a year.

2. Residencies will be set up in VA hospitals where younger doctors may study to qualify as specialists.

3. Promotions will be made on recommendations of special VA boards which, in general, compare with the "selection boards" operating in the Army and Navy for higher ranking officers.

4. Office of Chief Medical Director. The director will be paid a salary of \$12,000 a year. A Deputy Medical Director will receive \$11,500 and Assistant Medical Directors—not to exceed eight in number—will be paid \$11,000 each.

5. Medical Service: Chief grade, \$8,750 minimum to \$9,800 maximum; senior grade, \$7,175 minimum to \$8,225 maximum; intermediate grade, \$6,230 minimum to \$7,070 maximum; full grade, \$5,180 minimum to \$6,020 maximum; associate grade, \$4,300 minimum to \$5,180 maximum; junior grade, \$3,640 minimum to \$4,300 maximum.

(Continued on page 73)



## *President's Page*

### AN IOWA POLL

The recent poll conducted by the Des Moines Register on President Truman's compulsory health insurance plan published December 16 of last year is most opportune.

The over-all result of the poll should be most encouraging to the medical profession of Iowa. Practically one-half of the citizens of Iowa (49 per cent) oppose the plan, and of the 40 per cent who favor the plan, 25 per cent would not be willing to pay 4 per cent of their income to have the plan put into operation. It is also most encouraging to know that 84 per cent still have a regular physician and that 61 per cent did not put off going to a physician for financial reasons.

There is also a word of warning in the poll. One in ten of the citizens of this state are not sufficiently informed concerning compulsory health insurance to offer an opinion, and 36 per cent did not consult their physician because they felt they could not afford it.

This is a definite challenge to the medical profession of Iowa. It is most certainly the duty of every Iowa physician to inform this 10 per cent and the 40 per cent who do favor the Truman plan concerning the dangers of compulsory health insurance. One wonders if the 40 per cent who favored the Truman plan might not be composed largely of the 36 per cent who did not call a doctor for financial reasons. If such is the case, is not our Medical Service Plan an effective means of combating compulsory health insurance in Iowa?

The Council on Medical Service and Public Relations is preparing a plan for the organization of a National Health Congress. This is similar to the Iowa Interprofessional Association on a nationwide basis. The Council is also developing a specific national health program, with emphasis on the nationwide organization of locally administered prepayment medical plans sponsored by medical societies.

The American Medical Association is formulating plans to oppose the Wagner and Pepper bills, upon which hearings will start shortly. Your Committee on Medical Service and Public Relations is taking an active part in the formation of these plans and is unanimous in insisting on active and intensive support of legislation opposing compulsory health insurance.

*R. S. Bernard, M.D.*

*President, Iowa State Medical Society*

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Hancock-Winnebago.....	C. V. Hamilton, Garner.....	W. F. Missman, Klemme.....	C. V. Hamilton, Garner
		G. F. Dolmage, Buffalo Center	G. F. Dolmage, Buffalo Center
Hardin.....	W. H. Van Tiger, Eldora.....	F. N. Cole, Iowa Falls.....	F. N. Cole, Iowa Falls
Harrison.....	R. H. Cutler, Little Sioux.....	F. H. Hanson, Magnolia.....	
Henry.....	S. W. Huston, Mt. Pleasant.....	J. S. Jackson, Mt. Pleasant.....	S. W. Huston, Mt. Pleasant
Howard.....	W. A. Bockoven, Cresco.....	F. E. Giles, Cresco.....	W. A. Bockoven, Cresco
Humboldt.....	C. A. Newman, Bode.....	R. W. Beardsley, Livermore.....	I. T. Schultz, Humboldt
Ida.....	M. W. Grubb, Galva.....	W. P. Crane, Holstein.....	E. S. Parker, Ida Grove
Iowa.....	L. A. Miller, North English.....	I. J. Sinn, Williamsburg.....	I. J. Sinn, Williamsburg
Jackson.....	E. V. Andrew, Maquoketa.....	J. J. Tilton, Bellevue.....	F. J. Swift, Maquoketa
Jasper.....	R. F. Frech, Newton.....	T. D. Wright, Newton.....	R. W. Wood, Newton
Jefferson.....	R. A. McGuire, Fairfield.....	I. N. Crow, Fairfield.....	I. N. Crow, Fairfield
Johnson.....	E. W. Paulus, Iowa City.....	R. H. Plocks, Iowa City.....	G. C. Albright, Iowa City
Jones.....	J. D. Paul, Anamosa.....	C. R. Smith, Wyoming.....	T. M. Redmond, Monticello
Keokuk.....	T. J. G. Dulin, Sigourney.....	John Maxwell, What Cheer.....	D. L. Grothaus, Delta
Kossuth.....	P. V. Janse, Algona.....	M. G. Bourne, Algona.....	J. G. Clapsaddle, Burt
Lee.....	W. M. Hogle, Keokuk.....	H. F. Noble, Fort Madison.....	R. L. Feightner, Ft. Madison
		B. L. Gilfillan, Keokuk	B. L. Gilfillan, Keokuk
Linn.....	C. S. Day, Cedar Rapids.....	D. S. Challed, Cedar Rapids.....	B. F. Wolverton, Cedar Rapids
Louisia.....	J. W. Pence, Columbus Junction.....	L. E. Weber, Wapello.....	J. H. Chittum, Wapello
Lucas.....	A. L. Yocom, Jr., Chariton.....	R. E. Anderson, Chariton.....	S. L. Throckmorton, Chariton
Lyon.....		J. H. Sherlock, Rock Rapids.....	G. M. DeYoung, George
Madison.....	H. E. Carver, Earlham.....	E. M. Olson, Winterset.....	C. B. Hickenlooper, Winterset
Mahaska.....	C. N. Bos, Oskaloosa.....	F. A. Gillett, Oskaloosa.....	E. B. Wilcox, Oskaloosa
Marion.....	V. J. Elliott, Knoxville.....	D. A. Mater, Knoxville.....	H. L. Bridgeman, Knoxville
Marshall.....	J. E. Sinning, Marshalltown.....	O. D. Wolfe, Marshalltown.....	A. D. Woods, State Center
Mills.....	W. A. DeYoung, Glenwood.....	T. E. Shonka, Malvern.....	D. W. Harman, Glenwood
Mitchell.....	M. O. Eiel, Osage.....	R. L. Whitley, Osage.....	T. S. Walker, Riceville
Monona.....	E. J. Liska, Ute.....	E. E. Gingles, Onawa.....	C. W. Young, Onawa
Monroe.....	H. J. Richter, Albion.....	T. A. Moran, Melrose.....	C. C. Fowler, Lovilia
Montgomery.....	L. R. Moriarty, Villisca.....	Helge Borre, Red Oak.....	Oscar Alden, Red Oak
Muscatine.....		J. L. Klein, Jr., Muscatine.....	T. F. Beveridge, Muscatine
O'Brien.....	C. A. Samuelson, Sheldon.....	W. S. Balkema, Sheldon.....	W. R. Brock, Sheldon
Osceola.....	H. B. Paulsen, Harris.....	W. F. Thayer, Ocheyedan.....	Frank Reinsch, Ashton
Page.....	N. M. Johnson, Clarinda.....	J. F. Aldrich, Shenandoah.....	W. H. Maloy, Shenandoah
Palo Alto.....	J. W. Woodbridge, Emmetsburg.....	P. O. Nelson, Emmetsburg.....	H. L. Brereton, Emmetsburg
Plymouth.....	M. J. Joynt, Le Mars.....	L. C. O'Toole, Le Mars.....	W. L. Downing, Le Mars
Pocahontas.....	W. F. Brinkman, Pocahontas.....		C. L. Jones, Gilmore City
Polk.....	A. E. Merkel, Des Moines.....	E. W. Anderson, Des Moines.....	J. B. Synhorst, Des Moines
Pottawattamie.....	F. E. Marsh, Council Bluffs.....	G. V. Caughlan, Council Bluffs.....	G. N. Best, Council Bluffs
Poweshiek.....	H. C. Parsons, Grinnell.....	C. E. Harris, Grinnell.....	C. E. Harris, Grinnell
Ringgold.....	O. L. Fullerton, Redding.....	J. W. Hill, Mt. Airy.....	E. J. Watson, Diagonal
Sac.....	A. A. Blum, Wall Lake.....	J. W. Gauger, Early.....	J. R. Dewey, Schaller
Scott.....	W. C. Goenne, Davenport.....	J. H. Sunderbruch, Davenport.....	A. P. Donohoe, Davenport
Shelby.....	J. P. McGowan, Harlan.....	A. L. Nielson, Harlan.....	A. L. Nielson, Harlan
Sioux.....	E. B. Grossmann, Orange City.....	C. B. Murphy, Alton.....	Wm. Doornink, Orange City
Story.....	Julia Cole, Ames.....	W. B. Armstrong, Ames.....	Bush Houston, Nevada
Tama.....	G. T. McDowell, Gladbrook.....	G. M. Dalbey, Traer.....	A. A. Pace, Toledo
Taylor.....	W. H. Cash, Lenox.....	J. H. Gasson, Bedford.....	G. W. Rimel, Bedford
Union.....	J. A. Liken, Creston.....	C. C. Rambo, Creston.....	C. C. Rambo, Creston
Van Buren.....	Roscoe Pollock, Douds-Leando.....	J. A. Craig, Keosauqua.....	L. A. Coffin, Farmington
Wapello.....	R. O. Hughes, Ottumwa.....	L. A. Taylor, Ottumwa.....	C. A. Henry, Farson
Warren.....	M. B. Cunningham, Norwalk.....	C. H. Mitchell, Indianola.....	C. H. Mitchell, Indianola
Washington.....	E. D. Miller, Wellman.....	W. S. Kyle, Washington.....	E. D. Miller, Wellman
Wayne.....	D. R. Ingraham, Sewal.....	C. F. Brubaker, Corydon.....	J. H. McCall, Allerton
Webster.....	T. J. Dorsey, Fort Dodge.....	P. C. Otto, Fort Dodge.....	H. E. Nelson, Dayton
Winnebago.....	R. N. Svendsen, Decorah.....	H. H. Ennis, Decorah.....	L. C. Kuhn, Decorah
Winnesiek.....	C. R. Watkin, Sioux City.....	R. C. Muga, Sioux City.....	D. B. Blume, Sioux City
Woodbury.....	B. H. Osten, Northwood.....	M. P. Allison, Northwood.....	S. S. Westly, Manly
Worth.....		J. R. Christensen, Eagle Grove.....	J. H. Sams, Clarion
Wright.....	L. D. MacNaughton, Eagle Grove.....		



# Roster of Iowa Physicians in Military Service

As of January 22, 1946

## Adams County

Bain, C. L., Corning (St. Louis, Mo.).....Comdr., U.S.N.R.

## Allamakee County

Ivens, M. H., Waukon (Miami Beach, Fla.).....Capt., A.U.S.

## Appanoose County

Condon, F. J., Centerville (Owensboro, Ky.)...Major, U.S.P.H.S.  
Edwards, R. R., Centerville (APO 758, New York,  
N. Y.).....Major, A.U.S.  
Huston, M. D., Centerville (Hot Springs, Ark.).....Capt., A.U.S.

## Benton County

Senfeld, Sidney, Belle Plaine

## Black Hawk County

Bickley, D. W., Waterloo (APO New York, N. Y.)...Capt., A.U.S.  
Bickley, J. W., Waterloo (APO 956, San Francisco,  
Cal.).....Capt., A.U.S.  
Butts, J. H., Waterloo (Galveston, Texas).....Comdr., U.S.N.R.  
Eriesson, M. G., Cedar Falls (Fort Bragg, N. Car.)...Capt., A.U.S.  
Hartman, H. J., Waterloo.....Capt., A.U.S.  
Hoyt, C. N., Cedar Falls (APO 635, New York,  
N. Y.).....Capt., A.U.S.  
Marquis, F. M., Waterloo (APO 513, New York,  
N. Y.).....Capt., A.U.S.  
Rohlf, E. L., Jr., Waterloo.....Major, A.U.S.  
Seibert, C. W., Waterloo (Colorado Springs, Colo.)...Major, A.U.S.  
Smith, R. G., Cedar Falls (APO 512, New York,  
N. Y.).....Major, A.U.S.  
Trunnell, T. L., Waterloo (Parris Island, S. Car.)...Lt. U.S.N.R.

## Boone County

Brewster, E. S., Boone (APO 254, New York, N. Y.)...Major, A.U.S.  
Healy, M. J., Boone (Fort Sill, Okla.).....Capt., A.U.S.

## Bremer County

Blum, O. S., Waverly (Fleet PO, San Francisco,  
Cal.).....Lt., U.S.N.R.

## Buena Vista County

Hansen, R. R., Storm Lake.....Lt., U.S.N.R.  
Shope, C. D., Storm Lake (Fort Des Moines, Ia.)...Capt., A.U.S.  
Witte, H. J., Marathon (APO 350, New York,  
N. Y.).....Major, A.U.S.

## Butler County

James, R. A., Allison (Mare Island, Cal.)

## Calhoun County

McVay, M. J., Lake City (Waco, Texas).....Capt., A.U.S.  
Peek, L. H., Lake City (Camp Carson, Colo.).....Capt., A.U.S.  
Stevenson, W. W., Rockwell City (Seattle, Wash.)  
.....Lt. Comdr., U.S.N.R.

## Carroll County

Cochran, J. L., Carroll (Gulfport, Miss.)  
Freedland, Maurice, Coon Rapids  
Scannell, R. C., Carroll (Denver, Colo.).....Capt., A.U.S.  
Wyatt, M. R., Manning (Chatham Field, Ga.).....Capt., A.U.S.

## Cass County

Ergenbright, W. V., Atlantic (APO 331, San Francisco,  
Cal.).....Capt., A.U.S.  
Peterson, M. T., Atlantic (Fleet PO, San Francisco,  
Cal.).....Capt., A.U.S.  
Schiff, Joseph, Anita (Walla Walla, Wash.).....Capt., A.U.S.

## Cedar County

Laughlin, R. M., Tipton (San Diego, Cal.).....Lt., U.S.N.R.

## Cerro Gordo County

Adams, C. O., Mason City (Fort Lewis, Wash.)...Major, A.U.S.  
Egloff, W. C., Mason City.....Capt., A.U.S.  
Fitzpatrick, M. R., Mason City (Ft. Dix, N. J.)...1st Lt., A.U.S.  
Harris, R. H., Mason City (Barksdale Field, La.)...Capt., A.U.S.  
Harrison, G. E., Mason City.....Col., A.U.S.  
Morgan, P. W., Mason City (APO 403, New York,  
N. Y.).....Capt., A.U.S.  
Mullen, L. M., Mason City (Kansas City, Mo.)...Capt., A.U.S.  
Tice, G. I., Mason City (Mare Island, Cal.).....Lt. (jg), U.S.N.R.  
Tice, W. A., Mason City (Ft. Eustis, Va.).....Lt. (jg), U.S.N.R.  
Woodward, E. R., Mason City (Great Lakes, Ill.)...Lt., U.S.N.R.

## Cherokee County

Bullock, G. D., Washta.....Capt., A.U.S.

## Chickasaw County

O'Connor, E. C., New Hampton (Salinas, Cal.)...Capt., A.U.S.

## Clarke County

Armitage, G. I., Murray (APO 629, New York,  
N. Y.).....Capt., A.U.S.

## Clayton County

Glesne, O. G., Monona (Knoxville, Iowa).....Capt., A.U.S.

## Clinton County

Amesbury, H. A., Clinton.....Major, A.U.S.  
Burke, J. C., Clinton (Great Bend, Kan.).....A.U.S.  
O'Donnell, J. E., Clinton (Fleet PO, San Fran-  
cisco, Cal.).....Lt., U.S.N.R.  
Riedesel, E. V., Wheatland (Fort Douglas, Utah)  
Speigel, I. J., Clinton (Galesburg, Ill.).....Capt., A.U.S.  
Van Epps, E. F., Clinton.....Capt., A.U.S.  
Waggoner, C. V., Clinton (Fleet PO, San Francisco,  
Cal.).....Lt. Comdr., U.S.N.R.  
Wells, L. L., Clinton (APO 562, New York, N. Y.)...Capt., A.U.S.

## Crawford County

Grau, A. H., Denison (Oceanside, Cal.).....Comdr., U.S.N.R.

## Dallas-Guthrie Counties

Butterfield, E. T., Dallas Center (Palm Springs,  
Cal.).....1st Lt., A.U.S.  
Byrnes, A. W., Guthrie Center (Fort Custer, Mich.)...Major, A.U.S.  
Mullmann, A. J., Adel (APO 565, San Fran-  
cisco, Cal.).....Capt., A.U.S.  
Osborn, C. R., Dexter.....Lt., U.S.N.R.

## Delaware County

Baumgarten, Oscar, Earlville (APO 689, New York,  
N. Y.).....Capt., A.U.S.

## Des Moines County

Eigenfeld, M. L., Burlington (Cleveland, Ohio)....1st Lt., A.U.S.  
Sage, E. C., Burlington (Fleet PO, San Francisco,  
Cal.).....Lt. Comdr., U.S.N.R.

## Dickinson County

Buchanan, J. J., Milford (Fleet PO, San Francisco,  
Cal.).....Lt. Comdr., U.S.N.R.

## Dubuque County

Anderson, E. E., Dubuque (Bradley Field, Conn.)...Capt., A.U.S.  
Cunningham, J. C., Dubuque (Fairfield, Ohio).....Capt., A.U.S.  
Edstrom, Henry, Dubuque (Galesburg, Ill.).....Lt. Col., A.U.S.  
Hall, C. B., Dubuque.....Capt., A.U.S.  
Knoll, A. H., Dubuque (San Francisco, Cal.).....Major, A.U.S.  
Lavery, H. B., Dubuque (Washington, D. C.).....Lt. Col., A.U.S.  
Leik, D. W., Dubuque (Wichita Falls, Tex.).....Capt., A.U.S.  
Mueller, J. J., Dubuque (APO 230, New York, N. Y.)...Capt., A.U.S.  
Olson, P. F., Dubuque (San Francisco, Cal.)...Lt. Comdr., U.S.N.R.  
Painter, R. C., Dubuque (Cheyenne, Wyo.)...Lt. Comdr., U.S.N.R.  
Scharle, Theodore, Dubuque (Ft. Sam Houston,  
Texas).....Capt., A.U.S.  
Smith, C. W., Dubuque (Shoemaker, Cal.).....Lt., U.S.N.R.  
Straub, J. J., Dubuque (Bethesda, Md.).....Lt. Comdr., U.S.N.R.

## Emmet County

Collins, L. E., Estherville (APO 247, San Fran-  
cisco, Cal.).....1st Lt., A.U.S.  
Miller, O. H., Estherville (Seattle, Wash.)...Lt. Comdr., U.S.N.R.

## Fayette County

Henderson, W. B., Oelwein (APO 234, San Francisco,  
Cal.).....Lt. Col., A.U.S.  
Sulzbach, J. F., Oelwein  
Walsh, E. W., Hawkeye (Huntington, W. Va.).....A.U.S.  
Walsh, W. E., Hawkeye (Fleet PO, San Francisco,  
Cal.).....Lt. Comdr., U.S.N.R.

## Floyd County

Huber, R. H., Charles City.....1st Lt., A.U.S.  
Magdick, Carl, Charles City (Fleet PO, San Fran-  
cisco, Cal.).....Lt. (jg), U.S.N.R.

## Franklin County

Hedgecock, L. E., Hampton (Camp Lejeune,  
N. Car.).....Lt. Comdr., U.S.N.R.  
Randall, W. L., Hampton (Fleet PO, San Fran-  
cisco, Cal.).....Lt. Comdr., U.S.N.R.

## Fremont County

Kerr, W. H., Hamburg (APO 926, San Francisco,  
Cal.).....Capt., A.U.S.

## Greene County

Cartwright, F. P., Grand Junction (Colorado Springs,  
Colo.).....Capt., A.U.S.

## Grundy County

Cullison, R. M., Dike (Fort Howard, Md.).....Major, A.U.S.  
Rose, J. E., Grundy Center (Fleet PO, New York,  
N. Y.).....Lt. Comdr., U.S.N.R.

**Hamilton County**

Mooney, F. P., Jewell.....Capt., A.U.S.  
 Schrader, M. A., Webster City (Topeka, Kan.)...1st Lt., A.U.S.

**Hancock-Winnebago Counties**

Irish, T. J., Forest City (San Diego, Cal.).....Comdr., U.S.N.R.  
 Shaw, D. F., Britt (APO 334, San Francisco, Cal.) Major, A.U.S.  
 Thomas, C. W., Forest City (APO 519, New York, N. Y.).....Major, A.U.S.

**Hardin County**

Steenrod, E. J., Iowa Falls (Oceanside, Cal.)...Lt. Comdr., U.S.N.R.

**Harrison County**

Byrnes, C. W., Dunlap.....Capt., A.U.S.

**Henry County**

Brown, W. B., Mount Pleasant (APO 571, New York, N. Y.).....Major, A.U.S.  
 Cogan, Samuel, Mt. Pleasant  
 Dwankowski, Carl, Mt. Pleasant (APO 511, New York, N. Y.).....Major, A.U.S.  
 Gloeckler, B. B., Mount Pleasant.....Capt., A.U.S.  
 Megorden, W. H., Mount Pleasant (Ogden, Utah)...Capt., A.U.S.

**Humboldt County**

Coddington, J. H., Humboldt (APO 719, San Francisco, Cal.).....Capt., A.U.S.

**Ida County**

Martin, J. W., Holstein (Albany, Ga.).....Capt., A.U.S.

**Iowa County**

Geiger, U. S., North English.....Lt. Comdr., U.S.N.R.

**Jackson County**

Bausch, R. G., Bellevue (APO 251, New York, N. Y.).....Capt., A.U.S.  
 Skelley, P. B., Jr., Maquoketa (APO 247, San Francisco, Cal.).....1st Lt., A.U.S.

**Jasper County**

Doake, Clarke, Newton.....1st Lt., A.U.S.  
 Ritchey, S. J., Newton.....Lt. Col., A.U.S.

**Jefferson County**

Castell, J. W., Fairfield (Ft. Sam Houston, Texas) Capt., A.U.S.  
 Frey, Harry, Fairfield (Norfolk, Va.).....Lt. Comdr., U.S.N.R.  
 Graber, H. E., Fairfield (APO 75, San Francisco, Cal.).....Lt. Col., A.U.S.  
 Taylor, I. C., Fairfield (Washington, D. C.).....1st Lt., A.U.S.

**Johnson County**

Albert, S. M., Iowa City (Ft. Leonard Wood, Mo.)...Capt., A.U.S.  
 Bunge, R. G., Iowa City (Orlando, Fla.).....Capt., A.U.S.  
 Callahan, G. D., Iowa City (Fleet PO, San Francisco, Cal.).....Lt., U.S.N.R.  
 Cobb, E. A., Iowa City (APO 14987, San Francisco, Cal.).....1st Lt., A.U.S.  
 Coburn, F. E., Iowa City (Toronto, Canada).....Capt., R.C.A.  
 Crowell, E. A., Iowa City (Ft. Geo. Wright, Wash.) Capt., A.U.S.  
 Diddle, A. W., Iowa City (Fleet PO, San Francisco, Cal.).....Lt. Comdr., U.S.N.R.  
 Elmquist, H. S., Iowa City.....Lt. Comdr., U.S.N.R.  
 Emmons, M. B., Iowa City (Camp Bowie, Texas)...Capt., A.U.S.  
 Evers, L. B., Iowa City.....Major, U.S.P.H.S.  
 Field, Grace E., Iowa City.....Major, U.S.P.H.S.  
 Flax, Ellis, Iowa City (APO 758, New York, N. Y.) 1st Lt., A.U.S.  
 Francis, N. L., Iowa City (Annapolis, Md.)...Lt. (jg), U.S.N.R.  
 Galinsky, L. J., Oakdale.....Capt., A.U.S.  
 Hartung, Walter, Iowa City (Camp Carson, Colo.) Capt., A.U.S.  
 Hessin, A. L., Iowa City (APO 469, New York, N. Y.).....Major, A.U.S.  
 Irwin, R. L., Iowa City.....Capt., U.S.N.R.  
 January, L. E., Iowa City (Monahans, Texas)...Major, A.U.S.  
 Kanealy, J. F., Iowa City (APO 928, San Francisco, Cal.).....1st Lt., A.U.S.  
 Keislar, H. D., Iowa City (Washington, D. C.)...Capt., A.U.S.  
 Lage, R. H., Iowa City (San Francisco, Cal.)...Lt., U.S.N.R.  
 Laubscher, J. H., Iowa City (Ft. Benning, Ga.)...1st Lt., A.U.S.  
 Moreland, F. B., Iowa City (Maxwell Field, Ala.) 1st Lt., A.U.S.  
 Nagryf, S. F., Iowa City (Fleet PO, New York, N. Y.).....Lt., U.S.N.R.  
 Ringrose, E. J., Iowa City  
 Sells, R. L., Jr., Iowa City (Palmdale, Cal.)...Capt., A.U.S.  
 Speidel, G. P., Oakdale (Oteen, N. Car.).....Capt., A.U.S.  
 †Springer, E. W., Iowa City (APO 678, New York, N. Y.).....Capt., A.U.S.  
 Stadler, H. E., Iowa City (Washington, D. C.)...1st Lt., A.U.S.  
 Stephens, R. L., Iowa City (Orlando, Fla.).....Capt., A.U.S.  
 Stump, R. B., Iowa City (Denver, Colo.).....Capt., A.U.S.  
 Titus, E. L., Iowa City (Los Angeles, Cal.).....Col., A.U.S.  
 Trapasso, T. J., Iowa City (APO 520, New York, N. Y.).....Capt., A.U.S.  
 Voelker, C. A., Jr., Iowa City.....Capt., A.U.S.  
 Ward, R. H., Iowa City (Jacksonville, Fla.) Lt. Comdr., U.S.N.R.  
 Weatherly, H. E., Iowa City (APO 74, San Francisco, Cal.).....Major, A.U.S.  
 Wellmann, W. W., Iowa City (Louisville, Ky.)...1st Lt., A.U.S.  
 Ziffren, S. E., Iowa City (Springfield, Mo.).....1st Lt., A.U.S.

**Junior Members**

†Adams, M. P., Iowa City (Fleet PO, San Francisco, Cal.).....Lt. (jg), U.S.N.R.  
 Ahrens, J. H., Iowa City (APO San Francisco, Cal.)...A.U.S.  
 Ball, A. L., Iowa City (Camp Polk, La.).....Major, A.U.S.  
 Barrent, M. E., Iowa City (Camp Tyson, Tenn.)...Capt., A.U.S.  
 Black, N. M., Iowa City (APO New York, N. Y.)...Capt., A.U.S.  
 Blair, J. D., Iowa City (APO San Francisco, Cal.) Major, A.U.S.  
 Boyd, R. J., Iowa City (Spokane, Wash.).....Capt., A.U.S.  
 Brintnall, E. S., Iowa City (APO New York, N. Y.) Major, A.U.S.  
 Burr, S. P., Iowa City (APO San Francisco, Cal.) 1st Lt., A.U.S.  
 Carney, R. G., Iowa City (Fleet PO, San Francisco, Cal.).....Lt., U.S.N.R.  
 Connole, J. F., Iowa City (Camp Bowie, Texas) 1st Lt., A.U.S.  
 Couch, O. A., Iowa City (Camp Van Dorn, Miss.) 1st Lt., A.U.S.  
 Coulson, F. H., Iowa City (APO New York, N. Y.)...Capt., A.U.S.  
 Ehrenhaft, J. L., Iowa City (APO New York, N. Y.).....Capt., A.U.S.  
 Freiberg, M., Iowa City (Jefferson Barracks, Mo.)...A.U.S.  
 Hamilton, H. E., Iowa City (Chicago, Ill.).....1st Lt., A.U.S.  
 Harms, G. E., Iowa City (Carlisle Barracks, Penn.).....1st Lt., A.U.S.  
 Hendricks, A. B., Iowa City (Fleet PO, San Francisco, Cal.).....Lt. Comdr., U.S.N.  
 Hovis, Wm., Iowa City (Fleet PO, San Francisco, Cal.).....Lt. (jg), U.S.N.R.  
 Ide, L. W., Iowa City (Fort Warren, Wyo.).....1st Lt., A.U.S.  
 Kaplan, Nathan, Iowa City (Carlisle Barracks, Pa.).....1st Lt., A.U.S.  
 Keil, P. G., Iowa City (Sioux City, Iowa).....1st Lt., A.U.S.  
 Kelberg, M. R., Iowa City (Alameda, Cal.).....Lt., U.S.N.R.  
 Keleher, M. F., Iowa City (Great Lakes, Ill.) Lt. (jg), U.S.N.R.  
 Lowry, F. C., Iowa City (Sioux Falls, S. D.).....1st Lt., A.U.S.  
 McCann, J. P., Iowa City (Carlisle Barracks, Penn.).....1st Lt., A.U.S.  
 McQuiston, W. O., Iowa City (APO San Francisco, Cal.).....Capt., A.U.S.  
 Moen, B. H., Iowa City (APO 755, New York, N. Y.).....Capt., A.U.S.  
 Moon, R. E., Iowa City (APO New York, N. Y.) 1st Lt., A.U.S.  
 Odell, Lester, Iowa City (Pensacola, Fla.)...Lt. (jg), U.S.N.R.  
 Phillips, R. M., Iowa City (San Francisco, Cal.) 1st Lt., A.U.S.  
 Randall, R. G., Iowa City (Waterloo, Iowa).....Capt., A.U.S.  
 Rosenbusch, M., Iowa City (Fort Leonard Wood, Mo.).....1st Lt., A.U.S.  
 Russin, L. A., Iowa City (Fort Blanding, Fla.)...Capt., A.U.S.  
 Saar, J. L., Iowa City (APO New York, N. Y.)...Major, A.U.S.  
 Sawtelle, W. W., Iowa City.....Lt., U.S.N.R.  
 Schwidde, J. T., Iowa City (Carlisle Barracks, Penn.).....1st Lt., A.U.S.  
 Shand, J. A., Iowa City (Carlisle Barracks, Penn.).....1st Lt., A.U.S.  
 Shapiro, S. I., Iowa City  
 Simpson, F. E., Iowa City (Camp Grant, Ill.)...A.U.S.  
 Skewis, J. E., Iowa City (Corona, Cal.)...Lt. Comdr., U.S.N.R.  
 Skouge, O. T., Iowa City  
 Towle, R. A., Iowa City (Jacksonville, Fla.) Lt. Comdr., U.S.N.R.  
 Watters, V. G., Iowa City (Fort Leonard Wood, Mo.).....1st Lt., A.U.S.  
 Wicks, W. J., Iowa City (Camp Crowder, Mo.)...Capt., A.U.S.  
 Williams, L. A., Iowa City (Treasure Island, Cal.) 1st Lt., A.U.S.  
 Willumsen, H. C., Iowa City (Denver, Colo.)...Capt., A.U.S.  
 Wolkin, J., Iowa City (San Antonio, Texas) Capt., A.U.S.  
 Yetter, W. L., Iowa City (APO New York, N. Y.) Major, A.U.S.  
 Zahrt, N. E., Iowa City (Keeler Field, Miss.)...Capt., A.U.S.  
 Zimmerman, H. A., Iowa City (Santa Ana, Cal.) 1st Lt., A.U.S.

**Keokuk County**

Engelmann, A. T., What Cheer (Camp Polk, La.)...Capt., A.U.S.  
 Graham, J. A., Gibson (Needles, Cal.).....1st Lt., A.U.S.

**Kossuth County**

Corbin, R. L., Luverne (Des Moines, Iowa).....Capt., A.U.S.  
 Kenefick, J. N., Algona (Fleet PO, San Francisco, Cal.).....Comdr., U.S.N.R.

**Lee County**

Cleary, H. G., Fort Madison (Ft. Benning, Ga.).....Capt., A.U.S.  
 Johnstone, A. A., Keokuk (APO 942, Seattle, Wash.) Col., A.U.S.  
 McKee, T. L., Keokuk (Ft. Lauderdale, Fla.)...Major, A.U.S.  
 Rankin, J. R., Keokuk (Memphis, Tenn.)...Lt. Comdr., U.S.N.R.  
 Richmond, A. C., Fort Madison (San Bruno, Cal.).....Comdr., U.S.N.R.  
 Younan, Thomas, Ft. Madison.....Capt., A.U.S.

**Linn County**

Block, W. M., Cedar Rapids.....Major, A.U.S.  
 Chapman, R. M., Cedar Rapids (Chicago, Ill.)...Major, A.U.S.  
 Coughlan, V. H., Coggon (Fort Snelling, Minn.)...A.U.S.  
 Dunn, F. C., Cedar Rapids (La Junta, Colo.)...Major, A.U.S.  
 Gearhart, Merriam, Springville.....Lt. Col., A.U.S.  
 Hecker, J. T., Cedar Rapids (APO 408, New York, N. Y.).....Capt., A.U.S.  
 Leedham, C. L., Springville (Camp Campbell, Ky.)...Col., A.U.S.  
 Locher, R. C., Cedar Rapids (Temple, Texas) Major, A.U.S.  
 †MacDougal, R. F., Cedar Rapids (APO 9057, New York, N. Y.).....Capt., A.U.S.  
 McQuiston, J. S., Cedar Rapids (Fort Warren, Wyo.).....Lt. Col., A.U.S.  
 Murray, E. S., Cedar Rapids (APO 512 New York, N. Y.).....Lt. Col., A.U.S.



Noble, W. C., Cedar Rapids (Camp San Luis Obispo, Cal.) ..... 1st Lt., A.U.S.  
 Noe, C. A., Cedar Rapids (Hot Springs, Ark.) ..... Major, A.U.S.  
 Rieniets, J. H., Cedar Rapids, (Charleston, S. Car.) ..... Comdr., U.S.N.R.  
 Smrha, J. A., Cedar Rapids (Topeka, Kan.) ..... Capt., A.U.S.  
 Yavorsky, W. D., Cedar Rapids (Fleet PO, San Francisco, Cal.) ..... Comdr., U.S.N.

#### Louisia County

Tandy, R. W., Morning Sun (Oakland, Cal.) ..... Comdr., U.S.N.R.

#### Lyon County

Cook, S. H., Rock Rapids (Camp Chaffee, Ark.) ..... Major, A.U.S.  
 Moriarity, F. J., Rock Rapids (Corvallis, Ore.) ..... Capt., A.U.S.

#### Madison County

Chesnut, P. F., Winterset (APO 411, New York, N. Y.) ..... Capt., A.U.S.

#### Mahaska County

Bennett, G. W., Oskaloosa (APO 9641, San Francisco, Cal.) ..... Lt. Col., A.U.S.  
 Bos, H. C., Oskaloosa (APO 758, New York, N. Y.) ..... Major, A.U.S.  
 Gillett, R. M., Oskaloosa (Fleet PO, San Francisco, Cal.) ..... Capt. U.S.N.  
 Greenlee, M. R., Oskaloosa (Fleet PO, San Francisco, Cal.) ..... Comdr., U.S.N.R.  
 Hibbs, R. E., Oskaloosa ..... Major, A.U.S.  
 Keohen, G. F., Oskaloosa (APO 4299, San Francisco, Cal.) ..... Major, A.U.S.  
 Zager, L. L., Oskaloosa (APO 436, New York, N. Y.) ..... Capt., A.U.S.

#### Marion County

Ralston, F. P., Knoxville (Indio, Cal.) ..... Capt., A.U.S.  
 Schiek, C. M., Knoxville ..... Lt. Comdr., U.S.N.R.  
 Schroeder, M. C., Pella (Camp Robinson, Ark.) ..... Capt., A.U.S.  
 Williams, D. B., Knoxville ..... Capt., A.U.S.

#### Marshall County

Wells, R. C., Marshalltown (Gowen Field, Idaho) ..... Capt., A.U.S.  
 Wolfe, R. M., Marshalltown (Los Alamitos, Cal.) ..... Lt. Comdr., U.S.N.R.

#### Mills County

Kuitert, J. H., Glenwood (St. Cloud, Minn.) ..... Major, A.U.S.

#### Mitchell County

Culbertson, R. A., St. Ansgar (APO 331, San Francisco, Cal.) ..... Lt. Col., A.U.S.  
 Owen, W. E., Osage (San Diego, Cal.) ..... Lt., U.S.N.  
 Walker, T. G., Riceville (Hutchinson, Kan.) ..... Lt. Comdr., U.S.N.R.

#### Monona County

Ganzhorn, H. L., Mapleton (APO 72, San Francisco, Cal.) ..... Capt., A.U.S.  
 Harlan, M. E., Onawa (Fleet PO, San Francisco, Cal.) ..... Lt. (jg), U.S.N.R.  
 Wainwright, M. T., Mapleton (Hines, Ill.) ..... Capt., A.U.S.

#### Monroe County

Bay, F. N., Albia ..... Lt. Comdr., U.S.N.R.  
 Gilliland, C. H., Albia (Fleet PO, San Francisco, Cal.) ..... Lt. Comdr., U.S.N.  
 Smith, R. A., Albia (New Cumberland, Pa.) ..... Capt., A.U.S.

#### Montgomery County

Panzer, E. J. C., Stanton (Point Montara, Cal.) ..... Lt., U.S.N.R.  
 Rost, G. S., Red Oak (Halstead, Kan.) ..... Capt., A.U.S.  
 Sorensen, E. M., Red Oak (Jefferson Barracks, Mo.) ..... Capt., A.U.S.

#### Muscatine County

Asthalter, R. W., Muscatine (Fort Meade, Md.) ..... 1st Lt., A.U.S.  
 Carlson, E. H., Muscatine ..... Major, A.U.S.  
 Goad, R. R., Muscatine (Washington, D. C.) ..... Comdr., U.S.N.R.  
 Kimball, J. E., Jr., West Liberty (Sioux City, Iowa) ..... Major, A.U.S.  
 Norem, Walter, Muscatine (APO, Miami, Fla.) ..... Capt., A.U.S.  
 Robertson, T. A., West Liberty (APO 119, New York, N. Y.) ..... Capt., A.U.S.

#### O'Brien County

Getty, E. B., Primghar (APO 872, New York, N. Y.) ..... Major, A.U.S.  
 Moen, S. T., Hartley (St. Louis, Mo.) ..... Lt. Col., A.U.S.

#### Osceola County

Kuntz, G. S., Sibley (APO 34, New York, N. Y.) ..... Capt., A.U.S.

#### Page County

Barnes, C. A., Shenandoah ..... Major, A.U.S.  
 Bauer, Frank, Shenandoah (APO New York, N. Y.) ..... A.U.S.  
 Blackman, Nathan, Clarinda (Ft. Benj. Harrison, Ind.) ..... Major, A.U.S.  
 Brush, Frederick, Shenandoah (APO New York, N. Y.) ..... A.U.S.

Burdick, F. D., Shenandoah (Denver, Colo.) ..... Capt., A.U.S.  
 Burnett, F. K., Clarinda (Cheyenne, Wyo.) ..... Major, A.U.S.  
 Rausch, G. R., Clarinda (Sioux City, Iowa) ..... Capt., A.U.S.  
 Savage, L. W., Shenandoah (Fort Meade, Md.) ..... 1st Lt., A.U.S.  
 Schwidde, Tilford, Shenandoah (APO New York, N. Y.) ..... A.U.S.

#### Plymouth County

Bowers, C. V., LeMars (APO New York, N. Y.) ..... 1st Lt., A.U.S.  
 Fisch, R. J., LeMars (Denver, Colo.) ..... Capt., A.U.S.  
 Foss, R. H., Remsen (Homestead, Fla.) ..... Capt., A.U.S.  
 Wolfson, Harold, Kingsley (APO San Francisco, Cal.) ..... Lt. Col., A.U.S.

#### Pocahontas County

Blair, F. L., Jr., Fonda ..... Lt., U.S.N.R.  
 Larson, J. B., Laurens (APO 720, San Francisco, Cal.) ..... Capt., A.U.S.  
 Patterson, A. W., Fonda (Des Moines, Iowa) ..... Capt., A.U.S.

#### Polk County

Angell, C. A., Des Moines (APO 403, New York, N. Y.) ..... Capt., A.U.S.  
 Barner, J. L., Des Moines (Atlanta, Ga.) ..... Major, A.U.S.  
 Bender, H. R., Des Moines (Carlisle Barracks, Penn.) ..... 1st Lt., A.U.S.  
 Bond, T. A., Des Moines (Oakland, Cal.) ..... Lt. Comdr., U.S.N.R.  
 Bone, H. C., Des Moines (Arlington, Cal.) ..... Major, A.U.S.  
 Bruner, J. M., Des Moines (El Paso, Texas) ..... Lt. Col., A.U.S.  
 Bruns, P. D., Des Moines (Carlisle Barracks, Penn.) ..... 1st Lt., A.U.S.  
 Chambers, J. W., Des Moines (APO 758, New York, N. Y.) ..... Capt., A.U.S.  
 Connell, J. R., Des Moines ..... Major, A.U.S.  
 Corn, H. H., Des Moines (APO 9281, San Francisco, Cal.) ..... Capt., A.U.S.  
 Coughlan, D. W., Des Moines (APO 1052, San Francisco, Cal.) ..... Major, A.U.S.  
 Decker, H. G., Des Moines ..... Comdr., U.S.N.R.  
 Downing, A. H., Des Moines (Clinton, Iowa) ..... Capt., A.U.S.  
 Ervin, L. J., Des Moines ..... Lt. Col., A.U.S.  
 Fleck, W. L., Des Moines (Ft. Howard, Md.) ..... Lt. Col., A.U.S.  
 Fried, David, Des Moines (Carlisle Barracks, Penn.) ..... 1st Lt., A.U.S.  
 Fracasse, John, Des Moines ..... 1st Lt., A.U.S.  
 Gerchek, E. W., Des Moines ..... Major, A.U.S.  
 Glomset, D. A., Des Moines (Clinton, Iowa) ..... Capt., A.U.S.  
 Gordon, A. M., Des Moines ..... Major, A.U.S.  
 Graeber, F. O., Des Moines ..... Lt., U.S.N.R.  
 Harris, H. L., Des Moines (Salina, Kan.) ..... 1st Lt., A.U.S.  
 Kast, D. H., Des Moines (Fort Stevens, Ore.) ..... Capt., A.U.S.  
 Kelley, E. J., Des Moines (Columbus, Ohio) ..... Comdr., U.S.N.R.  
 Kirch, W. A. W., Des Moines (Astoria, Ore.) ..... Lt. Comdr., U.S.N.R.  
 Landis, S. N., Des Moines (West Palm Beach, Fla.) ..... 1st Lt., A.U.S.  
 La Tona, Salvatore, Des Moines ..... 1st Lt., A.U.S.  
 Lederman, James, Des Moines ..... 1st Lt., R.C.A.  
 Losh, C. W., Jr., Des Moines ..... Capt., A.U.S.  
 Maloney, P. J., Des Moines (Fort Lewis, Wash.) ..... 1st Lt., A.U.S.  
 Martin, L. E., Des Moines (Helena, Ark.) ..... 1st Lt., A.U.S.  
 Matheson, J. H., Des Moines (San Francisco, Cal.) ..... Lt. Comdr., U.S.N.R.  
 McCoy, H. J., Des Moines ..... Comdr., U.S.N.R.  
 McDonald, D. J., Des Moines ..... Major, A.U.S.  
 Mencher, E. W., Des Moines ..... 1st Lt., A.U.S.  
 Montgomery, S. A., Des Moines (Carlisle Barracks, Pa.) ..... Capt., A.U.S.  
 Morden, R. F., Des Moines (APO 635, New York, N. Y.) ..... Capt., A.U.S.  
 Mumma, C. S., Des Moines (Los Angeles, Cal.) ..... Major, A.U.S.  
 Nelson, A. L., Des Moines (Washington, D. C.) ..... Major, A.U.S.  
 Noun, L. J., Des Moines (Newport, R. I.) ..... Lt. Comdr., U.S.N.R.  
 Nourse, M. H., Des Moines (Fleet PO, New York, N. Y.) ..... Lt., U.S.N.  
 Overton, L. M., Des Moines (Fleet PO, San Francisco, Cal.) ..... Lt. Comdr., U.S.N.R.  
 Patton, B. W., Des Moines (Camp Robinson, Ark.) ..... 1st Lt., A.U.S.  
 Porter, R. J., Des Moines ..... Capt., A.U.S.  
 Schlaser, V. L., Des Moines (Hutchinson, Kan.) ..... Lt., U.S.N.  
 Shiffer, H. K., Des Moines ..... Capt., A.U.S.  
 Singer, P. L., Des Moines (Camp Grant, Ill.) ..... 1st Lt., A.U.S.  
 Skultety, J. A., Des Moines (Fleet PO, San Francisco, Cal.) ..... P. A. Surg., U.S.P.H.S.  
 Smith, R. T., Des Moines (APO 719, San Francisco, Cal.) ..... Capt., A.U.S.  
 \*Snodgrass, R. W., Des Moines (APO 9528, New York, N. Y.) ..... Capt., A.U.S.  
 Sorensen, R. M., Des Moines (Topeka, Kan.) ..... Major, U.S.P.H.S.  
 Stearns, A. B., Des Moines ..... Major, A.U.S.  
 Stitt, P. L., Des Moines (Seattle, Wash.) ..... Lt. (jg), U.S.N.R.  
 Toubes, A. A., Des Moines (APO 635, New York, N. Y.) ..... Capt., A.U.S.  
 Turner, H. V., Des Moines (San Antonio, Texas) ..... Capt., A.U.S.  
 Undergraff, Thomas, Des Moines (APO San Francisco, Cal.) ..... Capt., A.U.S.  
 Van Hale, L. A., Des Moines (Des Moines, Iowa) ..... Major, A.U.S.  
 Wagner, E. C., Des Moines (APO 1009, San Francisco, Cal.) ..... Capt., A.U.S.

#### Pottawattamie County

Floersch, E. B., Council Bluffs (Fleet PO, San Francisco, Cal.) ..... Lt. Comdr., U.S.N.R.  
 Hennessy, J. D., Council Bluffs (Clinton, Okla.) ..... Lt. Comdr., U.S.N.R.

Kurth, C. J., Council Bluffs (Camp Crowder, Mo.)...Major, A.U.S.  
 Mathiasen, H. W., Neola (Alexandria, La.)...Capt., A.U.S.  
 Mathiasen, J. W., Council Bluffs (Salt Lake City, Utah).....Capt., A.U.S.  
 Rosenfeld, R. T., Council Bluffs (Staten Island, N. Y.).....Major, A.U.S.  
 West, A. G., Council Bluffs (APO 230, New York, N. Y.).....Capt., A.U.S.  
 Wieseler, R. J., Avoca (McChord Field, Wash.).....A.U.S.  
 Wurl, O. A., Council Bluffs (Ft. Sam Houston, Texas).....Lt. Col., A.U.S.

#### Ringgold County

Seaman, C. L., Mount Ayr (Fort Smith, Ark.)...Major, A.U.S.

#### Sac County

Bassett, G. H., Sac City (Mobile, Ala.)...Lt. Comdr., U.S.N.R.

#### Scott County

†Baker, R. W., Davenport (APO 511, New York, N. Y.).....Capt., A.U.S.  
 Boyer, U. S., Davenport (Rock Island, Ill.)...Lt. Col., A.U.S.  
 Carey, E. T., Davenport (APO 928, San Francisco, Cal.).....1st Lt., A.U.S.  
 Christiansen, C. C., Dixon (APO 961, San Francisco, Cal.).....Capt., A.U.S.  
 Coleman, Tom, Davenport (APO 230, New York, N. Y.).....Capt., A.U.S.  
 Cummins, G. M., Jr., Davenport (Fort Custer, Mich.).....Capt., A.U.S.  
 Evans, H. J., Davenport (Daytona Beach, Fla.)...Capt., A.U.S.  
 Gibson, P. E., Davenport (Palm Springs, Cal.)...Major, A.U.S.  
 Goenne, Wm., Jr., Davenport (APO 91, New York, N. Y.).....Capt., A.U.S.  
 Hurevitz, H. M., Davenport.....Major, A.U.S.  
 Hurteau, Everett, Davenport (APO 647, New York, N. Y.).....Capt., A.U.S.  
 Hurteau, W. W., Davenport (Camp Berkeley, Texas).....Major, A.U.S.  
 Krakauer, Max, Davenport (APO 758, New York, N. Y.).....Capt., A.U.S.  
 Kuhl, A. B., Jr., Davenport (Ft. Meade, Md.)...1st Lt., A.U.S.  
 Perkins, R. M., Davenport (APO 121B, New York, N. Y.).....Capt., A.U.S.  
 Rendleman, Hugh, Davenport (Fleet PO, San Francisco, Cal.).....Lt. (jg), U.S.N.R.  
 Sheeler, I. H., Davenport (APO 350, New York, N. Y.).....Capt., A.U.S.

#### Shelby County

Bisgard, C. V., Harlan (Fleet PO, San Francisco, Cal.).....Comdr., U.S.N.R.  
 Griffith, W. O., Shelby.....Capt., A.U.S.  
 McGowan, J. P., Harlan (La Jolla, Cal.).....Comdr., U.S.N.R.

#### Sioux County

Gleysteen, R. R., Alton (Oceanside, Cal.).....Comdr., U.S.N.  
 Oelrich, C. D., Sioux Center (Buckley Field, Colo.)...Capt., A.U.S.

#### Story County

Lekwa, A. H., Story City (Fleet PO, San Francisco, Cal.).....Comdr., U.S.N.R.  
 McFarland, G. E., Jr., Ames (Fleet PO, San Francisco, Cal.).....Lt., U.S.N.R.

#### Tama County

Bezman, H. S., Traer (APO 902, San Francisco, Cal.).....Capt., A.U.S.  
 Havlik, A. J., Tama (Fleet PO, San Francisco, Cal.)...Lt., U.S.N.R.  
 Standefer, J. M., Tama (Great Lakes, Ill.).....Lt., U.S.N.R.

#### Union County

Paragas, M. R., Creston (APO 442, San Francisco, Cal.).....Capt., A.U.S.

#### Wapello County

Brentan, Emanuel, Ottumwa (Camp Carson, Colo.)...Capt., A.U.S.  
 Gilfillan, C. D. N., Eldon (Battle Creek, Mich.)...Capt., A.U.S.  
 Howell, H. P., Ottumwa (San Rafael, Cal.).....Major, A.U.S.  
 Moore, G. C., Ottumwa.....Capt., A.U.S.  
 Prewitt, L. H., Ottumwa (San Antonio, Texas)....Major, A.U.S.  
 Selman, R. J., Ottumwa (El Paso, Texas).....Col., A.U.S.  
 Struble, G. C., Ottumwa (Cleveland, Ohio).....Lt. Col., A.U.S.

#### Warren County

Hoffman, G. R., Lacona (Camp San Louis Obispo, Cal.).....Capt., A.U.S.

#### Washington County

Boice, C. L., Washington (Oakland, Cal.)...Lt. Comdr., U.S.N.  
 Droz, A. K., Washington (Fleet PO, San Francisco, Cal.).....Comdr., U.S.N.R.  
 Stutsman, R. E., Washington (Patuxent River, Md.).....Lt., U.S.N.R.

#### Webster County

Burleson, M. W., Fort Dodge (Pasadena, Cal.).....Capt., A.U.S.  
 Dawson, E. B., Fort Dodge (Fleet PO, San Francisco, Cal.).....Lt. Comdr., U.S.N.R.  
 Glesne, O. N., Ft. Dodge (New River, N. C.)...Lt. Comdr., U.S.N.R.  
 Joyner, N. M., Fort Dodge (Fargo, N. Dak.).....A.U.S.

Pederson, Thomas, Fort Dodge.....Capt., A.U.S.  
 Shrader, J. C., Fort Dodge (Camp Carson, Colo.)...Lt. Col., A.U.S.  
 †Thatcher, O. D., Fort Dodge (APO 634, New York, N. Y.).....Capt., A.U.S.  
 Van Patten, E. M., Ft. Dodge (Colorado Springs, Colo.).....Capt., A.U.S.

#### Woodbury County

Bettler, P. L., Sioux City (APO 235, San Francisco, Cal.).....Lt. Col., A.U.S.  
 Boe, Henry, Sioux City (Fort Snelling, Minn.)...Capt., A.U.S.  
 Cowan, J. A., Sioux City (Oklahoma City, Okla.).....Major, U.S.P.H.S.  
 Crowder, R. E., Sioux City (Kansas City, Mo.).....Lt. Comdr., U.S.N.R.  
 Dimsdale, L. J., Sioux City (Clinton, Iowa).....Capt., A.U.S.  
 Frank, L. J., Sioux City (Fleet PO, San Francisco, Cal.).....Comdr., U.S.N.R.  
 Graham, J. W., Sioux City (Pensacola, Fla.)...Lt. Comdr., U.S.N.R.  
 Grossman, M. D., Sioux City (APO 33, San Francisco, Cal.).....Capt., A.U.S.  
 Harris, D. M., Sioux City.....Capt., A.U.S.  
 Heffernan, C. E., Sioux City (APO 336, San Francisco, Cal.).....Capt., A.U.S.  
 Hicks, W. K., Sioux City (Spokane, Wash.)...Major, A.U.S.  
 Knott, P. D., Sioux City.....Capt., A.U.S.  
 Krigsten, W. M., Sioux City (Springfield, Mo.)...Lt. Col., A.U.S.  
 Lande, J. N., Sioux City (APO 63, New York, N. Y.) Major, A.U.S.  
 Martin, R. F., Sioux City (APO 403, New York, N. Y.).....Capt., A.U.S.  
 Mattice, L. H., Danbury.....Capt., A.U.S.  
 Reeder, J. E., Jr., Sioux City (Camp Carson, Colo.) Major, A.U.S.  
 Ryan, M. J., Sioux City (Topeka, Kan.).....Major, A.U.S.  
 Schwartz, J. W., Sioux City (APO 816, New York, N. Y.).....Lt. Col., A.U.S.  
 Simonsen, Marie N., Sioux City (Philadelphia, Pa.) Lt., U.S.N.R.  
 Tracy, J. S., Sioux City.....Major, A.U.S.

#### Wright County

Aagesen, C. A., Dows (APO 383, New York, N. Y.).....Capt., A.U.S.  
 Bird, R. G., Clarion (Asbury Park, N. J.)...Lt. Comdr., U.S.N.R.  
 Doles, E. A., Clarion (Spokane, Wash.).....Capt., A.U.S.

(\*) Reported missing in action.

(†) Reported deceased in service.

(‡) Reported prisoner of war.

### CLINICAL CONFERENCE SPONSORED BY CHICAGO MEDICAL SOCIETY

The tremendous success of the first clinical conference held two years ago served as a mandate to the Chicago Medical Society for the annual continuation of this type of program. Last year the conference was called off because of government restrictions on travel. This year the Society has been able to go ahead with its plans and the conference will be held at the Palmer House, Chicago, Illinois, on March 5, 6, 7, and 8.

There will be scientific programs consisting of half-hour lectures beginning at 8:30 a. m. and continuing until 5:00 p. m., with intermissions for viewing the scientific and technical exhibits, which promise to be most outstanding. Speakers have been secured from all sections of the United States and the program committee promises a discussion of the important fields of medicine. A banquet is being planned for Thursday night when a speaker of international reputation will talk on a topic of general interest.

Reservations for rooms should be made through the Chicago Convention Bureau, 33 North LaSalle Street, Chicago 2, Illinois. It is important that those planning to attend this conference make their reservations as soon as possible and arrange to room with a friend. Hotel rooms are at a premium. Early planning and reservations will prevent disappointment.



# WOMAN'S AUXILIARY NEWS

MRS. KEITH M. CHAPLER, *Chairman of Press and Publicity Committee*, Dexter, Iowa

*President*—MRS. SOREN S. WESTLY, Manly

*President-Elect*—MRS. MARION H. BRINKER, Jefferson

*Secretary*—MRS. KEITH M. CHAPLER, Dexter

*Treasurer*—MRS. HARRY W. DAHL, Des Moines

## Butler County

The Woman's Auxiliary to the Butler County Medical Society met with the doctors for the annual turkey dinner at Cashman's Cafe in Allison November 12. Immediately following the dinner, Mrs. Adelaide Tedder gave a very interesting talk on her experiences as a nurse while in service. The business meeting of the Auxiliary was then conducted in the home of Mrs. F. F. McKean with eight members and one guest present. Reports from committees were given. The Auxiliary voted to send fruit to the Orphans Home at Waverly.

Mrs. S. S. Westly of Manly, State President of the Auxiliary and honor guest at the dinner, stated that the cancer drive had netted over \$12,000. She suggested that one program be devoted to the study of tropical diseases, and closed her remarks by giving an "Ode to Doctors' Wives."

A paper on tuberculosis, written by Mrs. J. G. Evans, was read. Films illustrating cause, spread, and cure of tuberculosis concluded the program.

## Woodbury County

The Sioux Med-Dames met at the Scribbins Tea Shop, for a luncheon December 12, with twenty-eight members present.

Plans were made for a dinner honoring the returned physicians and the entertaining of the wives of the doctors attending the Sioux Valley Medical Meeting in January.

A nominating committee, including Mesdames Crowder, Reeder, Down, and Blackstone was appointed by the president.

A total of eleven dollars was collected for the Goodfellows.

The dinner honoring the returned physicians and their wives was held December 20 at the Martin Hotel with about seventy-five attending.

Accordion music was rendered throughout the dinner, followed by community singing. Each veteran then gave a short talk. After that Santa Claus arrived with gifts both useful and humorous.

A most delightful time was had and all agreed we should have more such affairs.

The Sioux Med-Dames have scheduled a luncheon on January 30 at the Martin Hotel for the wives of out-of-town doctors attending the Sioux Valley Medical convention.

Mrs. J. D. Lutton.

## THE PRESIDENT'S NATIONAL HEALTH PROGRAM\*

In November President Truman sent to the Congress a national health program for the nation. The health program included five features. The first was a proposal to grant federal aid for the building of hospitals and health centers throughout the nation. The need has been recognized and both the American Medical Association and the American Hospital Association have approved this measure, particularly since money will not be spent until the need is shown by a survey conducted in the individual state. Furthermore, state organizations are to be developed which will have responsibility and control. The place of the federal government is simply to provide needed funds. Incidentally this measure recognizes the fact that some areas of the country may need funds much more than others and beyond the ability of the state to match federal appropriations.

The second recommendation by President Truman is for an expansion of maternal and child health services. Recently Senator Pepper introduced a bill for this purpose which proposes to take care in childbirth of every mother in the United States who applies for it and which proposes, furthermore, to give medical care to every child in the United States up to 21 years of age. A casual estimate indicates that this would cost the nation billions of dollars. Is there any proof that the majority of Americans need Uncle Sam to pay their obstetrical bills and take care of their children?

President Truman also urges an extension of public health services throughout the United States. The American Medical Association has been among the leaders of the nation in urging that there be a fulltime public health service in every county. At present less than half the counties in the United States are provided with such service. Many coun-

\*An editorial by Morris Fishbein reprinted from the January 1946 issue of *Hygeia*.

ties are so sparsely settled they could not use a full time public health service.

President Truman's third proposal calls for federal aid in medical research and professional education. At present there are bills before the Congress dealing with the problem of mental hygiene and mental research. At the same time there are before the Congress the Kilgore and Magnuson bills providing for the creation of a National Science Foundation which is to be devoted to research in national defense, in the basic sciences and in the medical sciences and which is to provide fellowships and scholarships for competent young men. Apparently there has been no serious attempt by the Congress or by the President to coordinate the various measures proposed by various senators and congressmen to meet the national need in the field of health. All scientists throughout the nation are agreed on the desirability of a National Science Foundation. Practically all scientists favor a National Science Foundation which would be directed by a competent board of scientists. Unfortunately Senator Kilgore has indicated that the present administration prefers a National Science Foundation which would be headed by a politically appointed director. Do you want a politically appointed czar for scientific research?

The fifth proposal of the President is related to compensation for loss of earnings due to sickness. The American Medical Association, through its House of Delegates, has consistently favored that type of insurance.

As the fourth item in his proposal, President Truman launches again a proposal for a federal compulsory sickness insurance system which would absorb 4 per cent of the national income. It is proposed that this system cover all persons who work for a living and their dependents, meaning wage and salary earners, those in business for themselves, professional persons, farmers, agricultural workers, government employees and employees of nonprofit institutions and their families. Moreover, it is proposed that needy persons will be covered by premiums paid for them by public agencies and that these public agencies would be reimbursed by the federal government for at least a part of their expenditures.

In his statement President Truman reiterates the utterly preposterous statement previously made by Senator Wagner that this is not socialized medicine. Senator Wagner has always said that compulsory health insurance is not socialized medicine. Actually compulsory sickness insurance with federal control is both socialized medicine and state medicine. The American people are entitled to straightforward, honest explanations of what the proposed measures would do to them and to their physicians.

Senator Wagner says that the freedom of initiative of the American medical profession and the right of the public to privacy in medical care will be guaranteed by this act because each insured person will be entitled to choose his own doctor. However, the insured person must choose a doctor from

among the physicians in the community who agreed to be paid for their services by the federal government. The insured person can never get funds to pay a doctor who is outside the system. Senator Wagner says that the participating doctors are likewise free to choose the method through which they are to be paid from the insurance fund. They must, however, choose along with all of the doctors in the community, whether they are to be paid an annual salary or a fee, to be fixed by the government.

No one will ever convince the physicians of the United States that this is not socialized medicine. It would place the medical profession and the sick who are treated by the medical profession directly under political control. It would break down the great system of private hospitals, the Catholic, the Jewish, the Protestant and the community hospitals that have grown up in our country and destroy the philanthropic efforts for the care of the sick which have been the pride of our nation. It will deter competent young men from entering the medical profession and force them into other fields of action. It would make of the doctor a clock watcher and a slave to the system. It is the kind of regimentation that led to totalitarianism in Germany and the downfall of that nation. The time may yet come when the American worker, like the German, will have more salary deductions than take-home pay. It is the first step toward a regimentation of utilities, of industries and, eventually, of labor itself. This is the very antithesis of what we call American.

#### SPEAKERS BUREAU RADIO SCHEDULE

WOI—Wednesdays at 2:45 p. m.

WSUI—Thursdays at 9:30 a. m.

Feb. 6-7 Insomnia

Norman D. Render, M.D.

Feb. 13-14 Foods and Nutrition

P. Mabel Nelson, Ph.D., and  
Ercel Eppright, Ph.D.

Feb. 20-21 Hemorrhoids

Ralph H. Riegelman, M.D.

Feb. 27-28 Transfusion

Robert C. Hardin, M.D.

**Ninety-Fifth Annual Session  
Iowa State Medical Society  
Hotel Fort Des Moines  
Des Moines**

**April 18 and 19, 1946**

**Make Reservations Early**



# HISTORY OF MEDICINE IN IOWA

*Edited by the Historical Committee*

DR. WALTER L. BIERRING, Des Moines, Chairman

DR. HENRY G. LANGWORTHY, Dubuque, *Secretary* DR. CHARLES L. JONES, Gilmore City

DR. CLYDE A. HENRY, Farson

DR. LESTER C. KERN, Waverly

## Medical History of Wapello County

CLYDE A. HENRY, M.D., Farson

(Continued from December)

### PART V

#### THE DISTRIBUTION OF WAPELLO COUNTY PHYSICIANS

Wapello County, a parallelogram eighteen miles wide by twenty-four miles long, was named after an outstanding Indian, Chief Wapello. He and General Street were great friends and lived in peace together for many years—first at Prairie Du Chien, Wisconsin, and, for a short time before General Street's death, at the new Indian Agency. General Street was the first to die and was buried about a half mile east of the Agency Mansion House. Before his death a few years later, Chief Wapello requested to be buried by the side of his friend. Their graves, together with a few of General Street's pioneer relatives, are inclosed with a substantial iron fence and are well maintained by the Chicago Burlington and Quincy Railway Company, whose right-of-way approximates the little burying ground. A few years ago an appropriate memorial marker was also erected by the Daughters of the American Revolution.

Wapello County is divided into two nearly equal parts by the Des Moines River, which runs its course from the northwest to the southeast corners; and it was on, or near, the banks of this beautiful and useful stream that the pioneer trading posts were first located—Eddyville, in the northwest corner and Old Iowaville just beyond the extreme southeast, with Ottumwa in the center of the county. As the county increased in population, various other community centers were established: South of the river—Blakesburg, Chillicothe, Ormanville and Munterville; north of the river—Kirkville, Dahlonga, Agency City, Ashland (Ashland and Old Iowaville later vacated to the town of Eldon), Bladensburg, Competine (vacated in 1903 to Farson) and Highland Center.

Following is the distribution of physicians in Wapello County since its settlement in 1843 to 1945:

#### SOUTH OF THE RIVER

##### Blakesburg

Basinger, B. L.  
Farley, J. H.  
Finch, H. C.  
Gutch, William  
Hill, Emma Powell  
Hurst, William Neel  
Russell, J. R.  
Selman, Ralph  
Selman, T. J.  
Slavin, Charles Thomas  
Tate, Alexander M.  
Torrence, Laris P.  
Udell, C. N.

##### Ormanville

Farley, J. H.  
Torrence, Laris P.

##### Munterville

Winchell, —

##### Chillicothe

Berry, A. K.  
Campbell, L.  
Hyatt, B. F.  
Olney, A. C.  
Rambo, David T.

#### NORTH OF THE RIVER

##### Agency City

Ball, C. T.  
Best, —.  
Brumbaugh, E. H.

Davis, Morris L.  
 Hilton, William  
 Johnson, J. C.  
 La Force, D. A.  
 Lang, Ed R.  
 McElderry, Donald  
 Newell, J. F.  
 Phelps, C. W.  
 Porter, Henry W.  
 Reed, C. R.  
 Sage, D. M.  
 Sage, E. H.  
 Weir, A. R.

#### Kirkville

Abegg, William  
 Comstock, Alonson B.  
 Dinsmore, D. C.  
 Kepler, John C.  
 Kirkpatrick, —.  
 McCullough, S. C.  
 McCune, James Harold  
 McGlasson, J. S.  
 Newell, W. C.  
 Waddell, J. N.

#### Bladensburg

Parker, W. F.  
 Shearer, J. W.

#### Competine

Anthony, E.  
 Cowger, G. M.  
 Farguhar, Thomas  
 Henry, Clyde A.  
 Krout, J. B.

#### Farson

Clearwater, Henry W.  
 Henry, Clyde A.  
 Huff, L. D.  
 Pollock, Roscoe

#### Ashland

Allen, C.  
 La Force, James W.  
 Mingus, J. D.  
 Overholz, J. J.

#### Dahlonaga

Hinsey, J. C.

Searle, B. W.  
 Ward, E. S.

#### Highland Center

Anthony, E.  
 Lawson, F. A.  
 Packwood, —.

#### PHYSICIANS OF THE RIVER TOWNS

#### Eddyville

Bay, Edgar L.  
 Brunt, William  
 Buck, E. H.  
 Cornell, F. C.  
 Fish, —.  
 Flint, —.  
 Garwood, L.  
 Hickman, Solomon R.  
 McCrea, Eppie S.  
 McCrea, Francis M.  
 Nosler, James  
 Ross, William  
 Shahan, Richard F.  
 Sheffield, George  
 Sloan, W. K.  
 Sprague, Manley H.  
 Traister, John Edward  
 Vance, Frederick Elmer  
 Warner, —.

#### Eldon

Alverson, J. E.  
 Arenschie, E. M.  
 Bates, J. W.  
 Bilby, P. M.  
 Box, J. C.  
 Brownfield, G. R.  
 Gilfillan, C. D. N.  
 Huston, R. W.  
 Jay, David A.  
 Keston, R. W.  
 La Force, James W.  
 Moore, J. C.  
 Murphy, James O.  
 Sawyers, Sylvester Harlan  
 Schee, J. M.  
 Shaug, B. S.  
 Strickling, H.  
 Williams, A. O.

#### PRESENT MEMBERSHIP OF WAPELLO COUNTY MEDICAL SOCIETY

*Dr. Walter E. Anthony* was born January 13, 1889, in Santa Ana, California. His father, Dr. Enoch Anthony, a well-known Wapello County physician, and his mother, Mary (Nelson) Anthony, were natives of Athens, Missouri. At the age of six he came with his family to Wapello County, where his father practiced medicine at

Competine, Highland Center, and Ottumwa. He completed his early education in the Ottumwa High School and received the M.D. degree in 1912 from the Jefferson Medical College of Philadelphia, locating shortly thereafter in Ottumwa, where he has since been actively engaged in the practice of medicine. During World War I he





Upper, left to right: Walter E. Anthony, Edwin G. Barton, DeVoe O. Bovenmyer, Murdoch Bannister, Glenn C. Blome, Arthur L. Blome, Friedrich A. Hecker.\*  
 Lower, left to right: Clyde A. Henry, Edward B. Hoeven, Elias B. Howell, G. Raymond Johnson, Justus B. Roberts, Harold H. Moore, Frank W. Mills

served as Captain overseas with the 337th Field Artillery. Since the beginning of World War II he has rendered continuous service with Draft Board No. 2 for Wapello County. He is a member of the county, state, and national medical societies, and the Des Moines Valley Medical Association. He married Miss Mary Moss Funk on October 10, 1912, and they have one daughter.

*Dr. De Voe Oakley Bovenmyer* was born on a farm near Toledo, Iowa, March 19, 1901, the son of Samuel and Minnie Bovenmyer. He received his early education in the rural schools. After graduating from the Toledo High School, he entered the University of Iowa, and received the B.S. and M.D. degrees in 1926. He served the following internships: Department of Inter-



Upper, left to right: Jesse C. Moore, Vernon S. Downs, Edwin A. Nash, Fred L. Nelson, William C. Newell\*, David T. Rambo, David L. Rater  
 Lower: Harold A. Spilman, Siegmund F. Singer, Lawrence A. Taylor, Maude Taylor, Thomas L. Vineyard, Harry W. Vinson, John E. Traister, Eppie S. McCrae

(\*) Deceased.

nal Medicine, University Hospitals, Iowa City, 1926-1927; Department of Oto-Laryngology, University Hospitals, Iowa City, 1927-1929; Department of Ophthalmology, University Hospitals, Iowa City, 1929-1931. Having completed his special courses in the State University Hospitals, he moved to Beatrice, Nebraska, in 1931, where he practiced medicine two years. He moved to Ottumwa in 1933. His practice is limited to OALR. Dr. Bovenmyer is a member of the Iowa State Medical Society, the American Medical Association, the Wapello County Medical Society, the Des Moines and the Mississippi Valley Medical Associations. He is also a member of the Elks and Masonic lodges.

Dr. Bovenmyer has always been a consistent advocate of organized medicine, and is an active member of the staffs of the St. Joseph and Ottumwa Hospitals, and the Sunnyslope Sanatorium.

In 1930 he married Miss Margaret J. Jenkins, daughter of Dr. and Mrs. G. A. Jenkins of Albia, Iowa. They have two children, Dan Allen and Samuel Dell Bovenmyer.

*Dr. Murdoch Bannister* was born in Detroit, Michigan, December 25, 1868, the son of Colonel Dwight and Livinia (Murdoch) Bannister. His father was born in Ontario County, New York, February 3, 1833, and his mother was a native of Urbana, Ohio. When a young man, his father moved to Columbus, Ohio, where he was engaged for several years as land-grant sales agent for the Illinois Central Railway Company. Later he served as private secretary to Governor Salmon P. Chase, during the political campaign of 1860 when Mr. Chase stumped the country for Lincoln. In June, 1875, Dr. Bannister moved with his family to Ottumwa, where he received his early educational training in the public schools, became a student in the literary department of the State University of Iowa, from which he received the B.S. degree in 1891. He read medicine under Dr. D. A. La Force of Ottumwa and attended lectures one year at the Ohio Medical College, completing his medical course in the University of Pennsylvania, from which he received the M.D. degree in 1894. After serving one year as resident physician in the Polyclinic Hospital at Philadelphia, he was appointed medical examiner for the Western Division of the Chicago Burlington and Quincy Railway Company, with headquarters at Edmonton, South Dakota. He resigned this position at the end of three years and returned to his home town in 1899. From this date, through half a century and more, Dr. Bannister has been in continuous practice in Ottumwa except for a period of months during World War I when he served as Captain in the Medical De-

partment of the Air Forces stationed at Kelly Field, Texas, March Field, California, and Mineola, New York, respectively.

Dr. Bannister has been active in the affairs of the Wapello County Medical Society throughout the years of his membership, serving as its president in 1906, and he has contributed many papers to the scientific programs of county, state, and district medical societies. He has served in all official capacities on the staffs of both the Ottumwa and St. Joseph Hospitals. He is a member of the Des Moines Valley, the Wapello County, and the Iowa State Medical Societies, the American Medical Association, and is a Fellow of the American College of Surgeons. He served on the Iowa State Board of Control from 1910 to 1913.

On Tuesday evening, June 26, 1945, Dr. Bannister was the honored guest at a surprise dinner given at the Country Club in Ottumwa by the Wapello County Medical Society. The occasion marked the half century of unstinted medical service he has rendered his community, and was attended by not only the entire membership of the Wapello County Medical Society but prominent members of the medical profession from other parts of the state. From Des Moines came Dr. Walter L. Bierring, Iowa State Health Commissioner, who delivered the principal address. Dr. Daniel J. Glomset, a Des Moines physician, and Robert Bannister, Des Moines attorney and brother of Dr. Bannister, were also in attendance. Dr. Harold A. Spilman presented Dr. Bannister with the pin of the Fifty Year Club of the Iowa State Medical Society, and Dr. S. F. Singer, President of the Wapello County Medical Society, presented a pen and pencil set "as a token of our friendship and admiration."

In September, 1903, Dr. Bannister married Miss Keota W. Williams, a member of the Wapello County Bar Association. To them were born two sons—Dwight M., a professional journalist, who is editor of the *Decorah Journal*, and Morris B., an Ottumwa lawyer who enlisted in the Navy at the beginning of World War II. Mrs. Bannister died in 1931.

*Dr. Glenn Caldwell Blome* was born July 12, 1904, near Atlantic, Iowa, where he received his early education in the rural schools. He graduated from Madrid High School in 1920, after which he entered the State University of Iowa, receiving the B.A. degree in 1924 and the M.D. degree in 1927. He served a two-year internship in general surgery at the University Hospitals in Iowa City, and for four years was on the surgical staff there. He located in Ottumwa in 1933, and is engaged in the practice of general surgery. He



is a past president of the Wapello County Medical Society and an active member of the staffs of the St. Joseph and Ottumwa Hospitals. He is also a member of the state and national medical associations, the Des Moines Valley, and the Mississippi Valley Medical Societies. He married Laura Bolle June 4, 1925, and has two children.

*Dr. Freidrich Alexander Hecker* was born in St. Louis, Missouri, March 29, 1879, the son of Alfred and Malgen Hecker. Upon completion of his early education in the public schools of St. Louis he became a student at Kemper Military College, after which he studied at the University of Missouri, the University Medical College in Kansas City, the University of Kansas, and the University of Pennsylvania. He held the degrees of B.S., A.B., M.S., D.D.S., and M.D., and was a Fellow of the American College of Physicians, as well as a member of the county, state, and national medical associations, the Iowa Clinical Society, the American Bacteriological Society, and the American Society for the Advancement of Science. Dr. Hecker came to the St. Joseph Hospital in 1919 as pathologist and bacteriologist, a position he held until his death occurred at 10:30 a. m., Sunday, June 3, 1945, while he was at work in the laboratory at St. Joseph Hospital. His contributions to medical science marked him as one of the prominent bacteriologists of the Middle West.

He was a veteran of the Spanish-American War and World War I, and was a member of the Veterans of Foreign Wars. He married Elizabeth Raymond March 15, 1909, in Kansas City. They had five daughters.

(To be continued)

#### NEW HORIZONS FOR SERVICE AT IOWA METHODIST HOSPITAL

During the months of November and December 1945, one of the most remarkable money raising projects ever accomplished in the state of Iowa was carried on for Iowa Methodist Hospital. At the date of this writing, only a few thousand dollars remain to be raised to reach the full one million dollar goal.

Iowa Methodist Hospital, which was founded in 1901, has grown to where it is now the largest voluntary hospital in Iowa and is exceeded in size only by the University Hospital at Iowa City. Two years ago, Mr. A. H. Blank built and equipped the Raymond Blank Memorial Hospital for Children at a cost of nearly \$300,000, and this is now part of Iowa Methodist.

Adult patients, however, have not been so fortunate. No new building has been built for adults since the large east wing was completed in 1910.

The hospital is greatly in need of one hundred additional beds, as well as new operating rooms, new clinical and pathologic laboratories, and a new x-ray department. The present kitchens are only about one-fourth the size recommended for modern kitchens for an institution of this size. New birth rooms are acutely needed. The new building will also house new offices for the administration and new medical library.

The executive committee of the board of directors of the hospital has acted as the committee for raising the one million dollar fund and has done the work itself with the assistance of one hired stenographer. The success of the campaign has been remarkable, indicating the great need as well as the generosity of the community.

The hospital is now completely out of debt, and the new one million dollar wing will be completely paid for when built. It is interesting to note that the doctors have contributed nearly \$100,000 to this undertaking, and members of the Methodist Church \$150,000. The remaining three fourths of the million dollars has come from business firms and individuals in Des Moines and central Iowa.

Iowa Methodist looks forward—as one of America's truly great community hospitals—to new horizons of service.

#### VA DEPARTMENT OF MEDICINE AND SURGERY

(Continued from page 60)

6. Appointments of key executives will be for a four-year term, subject to removal by the Administrator for cause. Reappointment will be for the same term.

7. Doctors, dentists, nurses and technicians now employed by the VA will be continued on their present jobs pending determination of their qualifications for appointment in the new medical department.

8. Another provision of the act which will permit professional improvement of VA medical personnel will allow up to 5 per cent of such employees to study or do research work for periods of time up to 90 days. This will enable doctors, dentists, nurses and technicians to attend recognized schools or work with the U. S. Public Health Service or other research groups.

9. Although they are not subject to selection or promotion by Civil Service, the members of the new VA Department of Medicine and Surgery will be under the Civil Service Retirement Act of 1920 and will receive its benefits.

The American Association of Obstetricians, Gynecologists and Abdominal Surgeons Foundation announces that the annual prize contest will be conducted again this year.

For information address Dr. James R. Bloss, Secretary, 418 Eleventh Street, Huntington 1, West Virginia.

# THE JOURNAL BOOK SHELF

## BOOKS RECEIVED

**THE OSSEOUS SYSTEM, A Handbook of Roentgen Diagnosis**—By Vincent W. Archer, M.D., Professor of Roentgenology, University of Virginia Department of Medicine. The Year Book Publishers, Inc., Chicago, 1945. Price, \$5.50.

**SYNOPSIS OF GENITOURINARY DISEASES**—By Austin I. Dodson, M.D., Professor of Genitourinary Surgery, Medical College of Virginia; Genitourinary Surgeon to the Hospital Division, Medical College of Virginia; Genitourinary Surgeon to Crippled Children's Hospital; Urologist to St. Elizabeth's Hospital; Urologist to St. Luke's Hospital and McGuire Clinic. Fourth edition. The C. V. Mosby Company, St. Louis, 1945. Price, \$3.50.

**DISEASES OF THE BREAST**—By Charles F. Geschickter, M.D., Lt. Comdr., M.C., U.S.N.R., Director of the Francis P. Garvan Cancer Research Laboratory, Pathologist, St. Agnes Hospital, Baltimore; with Special Section on Treatment in Collaboration with MURRAY M. COPELAND, M.D., Instructor in Surgery, Johns Hopkins Medical School, Visiting Surgeon and Assistant Oncologist, University Hospital, University of Maryland Medical School, Visiting Oncologist, Baltimore City Hospital. Second edition. J. B. Lippincott Company, Philadelphia, 1945. Price, \$12.00.

**A TEXTBOOK OF NEURO-ANATOMY**—By Albert Kuntz, M.D., Professor of Micro-Anatomy in St. Louis University School of Medicine. Fourth edition, thoroughly revised. Lea & Febiger, Philadelphia, 1945. Price, \$6.50.

**A TEXTBOOK OF SURGERY BY AMERICAN AUTHORS**—Edited by Frederick Christopher, M.D., Associate Professor of Surgery, Northwestern University Medical School, Chief Surgeon, Evanston (Illinois) Hospital. Fourth edition, revised and reset. W. B. Saunders Company, Philadelphia, 1945. Price, \$10.00.

**HEMATOLOGY, For Students and Practitioners**—By Willis M. Fowler, M.D., Professor of Internal Medicine, University of Iowa, Iowa City. With a chapter by ELMER L. DEGWON, M.D., Assistant Professor of Internal Medicine, University of Iowa, Iowa City. Paul B. Hoeber, Inc., New York, 1945. Price, \$8.00.

**CLINICAL PARASITOLOGY**—By Charles Franklin Craig, M.D., Col., A.U.S. (Retired), Formerly Director, Army Medical School, and Assistant Commandant, Army Medical Center, Washington, D. C., Emeritus Professor of Tropical Medicine in the Tulane University of Louisiana, New Orleans; and ERNEST CARROLL FAUST, Ph.D., Professor of Parasitology in the Department of Tropical Medicine, Tulane University of Louisiana, New Orleans, Consultant to the Secretary of War, Army Epidemiologic Board on Epidemic and Tropical Diseases, Consultant U. S. Public Health Service, Honorary Consultant, Army Medical Library. Fourth edition, thoroughly revised. Lea & Febiger, Philadelphia, 1945. Price, \$10.00.

**CLASSIC DESCRIPTIONS OF DISEASE**—By Ralph H. Major, M.D., Professor of Medicine, University of Kansas School of Medicine. Third edition, revised and enlarged. Charles C. Thomas, Publishers, Springfield, Illinois, 1945. Price, \$6.50.

**MICROBES OF MERIT**—By Otto Rahn, Professor of Bacteriology, Cornell University. The Jaques Cattell Press, Lancaster, Pennsylvania, 1945. Price, \$4.00.

**IN THE DOCTOR'S OFFICE—The Art of the Medical Assistant**—By Esther Jane Parsons, Formerly Research Technician, Department of Biochemistry, College of Physicians and Surgeons, Columbia University; Formerly Instructor in Medical Office Procedures, Paine Hall School for Medical Assistants, New York City. J. B. Lippincott Company, Philadelphia, 1945. Price, \$2.00.

## BOOK REVIEWS

### PEDIATRIC X-RAY DIAGNOSIS

A Textbook for Students and Practitioners of Pediatrics, Surgery and Radiology

By John Caffey, M.D., Associate Professor of Pediatrics, College of Physicians and Surgeons, Columbia University; Associate Pediatrician and Roentgenologist, Babies Hospital and Vanderbilt Clinic, New York City; Consulting Pediatrician, Grasslands Hospital, Westchester County, N. Y., and St. John's Hospital, Yonkers, N. Y. The Year Book Publishers, Inc., Chicago, 1945. Price, \$12.50.

This is undoubtedly one of the most important pediatric books ever to be published; in fact, it is the first book solely devoted to pediatric roentgenology in thirty-five years.

Semi-monthly roentgen conferences at the Babies Hospital for the past twenty years have provided the author with a rich source of material in the compilation of the illustrations and the accompanying discussions. The volume is 818 pages in length and has 711 illustrations. No roentgen physics, technic or therapy is included. The general plan of the book is to show by drawings and x-ray films the shadows cast by normal tissues and by diseased tissues of the various systems of the body. Application of roentgenology to pediatric diagnoses in a vast variety of clinical conditions is beautifully set forth. Care has been taken to make the explanatory legend of each illustration readily understandable to the reader.

The author's discussion of disease processes illustrated by x-ray films provides a method of teaching vastly superior to the merely descriptive phases usually found in the ordinary pediatric text. We recommend this book most highly to students, roentgenologists, pediatricians, and general practitioners. It is a "must" book in the library of every pediatrician.

L. F. H.

### DISEASES OF THE NOSE, THROAT AND EAR

Edited by Chevalier Jackson, M.D., Honorary Professor of Broncho-Esophagology, Temple University, Philadelphia; and CHEVALIER L. JACKSON, M.D., Professor of Broncho-Esophagology, Temple University, Philadelphia. With the Collaboration of 64 Outstanding Authorities. W. B. Saunders Company, Philadelphia, 1945. Price, \$10.00.

This book demonstrates the Jackson theory of teamwork. The sixty-four collaborators are professors, and above all teachers, in the specialty about which they have written. The subjects are handled so that the reader can easily absorb the desired information, whether it be anatomy, physiology, pathology, diagnosis and differential diagnosis, or treatment. The treatment angle is particularly worthwhile to the general practitioner or to the physician who does only part-time ear, nose and throat work. The chapter on audiometry and hearing aids will help clear up many of these problems. The chapter on diseases of the external ear is par-



ticularly timely with so many men returning from the South Pacific with various fungus infections of the ear. The list of references at the end of each article gives an opportunity for further detailed study when necessary and is a valuable adjunct for students and research workers. For the specialist it is complete even to detailed treatment, including the sulfas, penicillin, etc.

This is a teaching text written by teachers, excellently illustrated in black and white and color. It is recommended as a most excellent reference book.

J. A. D.

### MEN WITHOUT GUNS

Text by DeWitt Mackenzie, War Analyst of The Associated Press; Descriptive Captions by MAJOR CLARENCE WORDEN, Medical Department of the United States Army; Foreword by MAJOR GENERAL NORMAN T. KIRK, Surgeon General of the United States Army. The Blakiston Company, Philadelphia, 1945. Price, \$5.00.

This volume, with text by DeWitt Mackenzie, War Analyst of the Associated Press, contains 137 plates from the Abbott Collection of Paintings owned by the United States Government. This collection is without question representative of the finest paintings which have come out of World War II and contains illustrations from all theaters where our troops saw action.

Undoubtedly many service physicians will desire this volume for their own libraries. For those physicians who did not enter the service, this collection is highly recommended as representative of the conditions under which medical personnel actually worked. It is a fitting tribute to the splendid character of the medical care afforded servicemen under battle conditions.

E. M. G.

### ANNUAL REPRINT OF THE REPORTS OF THE COUNCIL ON PHARMACY AND CHEMISTRY OF THE AMERICAN MEDICAL ASSOCIATION FOR 1944

American Medical Association, Chicago, 1945. Price, \$1.00.

The Council on Pharmacy and Chemistry recently issued the thirty-sixth edition of the Annual Reprint of the Reports of the Council on Pharmacy and Chemistry of the American Medical Association. This volume contains in compact form not only the reports of the Council which have been published in *The Journal of the American Medical Association* during the past year, but also some additional reports which were not considered of sufficient importance to be published in *The Journal*.

The present volume is rather unusual in that it contains not one report concerning a product found unacceptable. However, there are five reports on the omission of products from New and Nonofficial

Remedies, mainly for the reason that they have outlived their usefulness, and in most cases the manufacturers have expressed their lack of desire for continued inclusion of their brands. These reports are: Erysipelas Streptococcus Antitoxin and Antierysipelas Serum omitted from New and Nonofficial Remedies; Ichthammol Preparations, Isarol, Ichthy-nat, Ichthyol, omitted from New and Nonofficial Remedies and Soluble Ichthammol, not within the scope of New and Nonofficial Remedies; Iodine Compounds: Iodalbin and Stearodine; Iodo-Casein; Iothion; and Iodostarine; omitted from New and Nonofficial Remedies; Mercuric Oxycyanide, Mercuric Salicylate and Mercuric Succinimide omitted from New and Nonofficial Remedies and status of Antimeningococcic Serum and Meningococcus Antitoxin.

This volume is a veritable mine of information on subjects of general interest to the physician, pharmacist and the pharmaceutical manufacturer. The reports concern deliberations of the Council on general subjects ranging from the use of the electron microscope to the appraisal of new drugs. The report on pathogenic bacteria, rickettsias and viruses as shown by the electron microscope is noteworthy as being pioneer work in this field. The report on the current status of prophylaxis by hemophilus pertussis vaccine was prefatory to the acceptance by the Council on various brands of pertussis vaccines and pertussis vaccine combinations. The valuable and highly informative article on local treatment of thermal cutaneous burns reports on the latest and best work in this field.

### CANCER OF THE COLON AND RECTUM Its Diagnosis and Treatment

By Fred W. Rankin, M.D., Surgeon, St. Joseph's and Good Samaritan Hospitals, Lexington, Kentucky, and A. STEPHENS GRAHAM, M.D., Surgeon, Stuart Circle Hospital, Richmond, Virginia; Assistant Professor of Surgery, Medical College of Virginia. Charles C. Thomas, Springfield, Illinois, 1945. Price, \$5.50.

This is the second printing of this volume. It is a good book, is well organized, and in it one may find answers to questions which arise concerning colon cancers without going over the entire text.

The book presents tenets on the subject which are the result of the abundant experience of the authors. There is an excellent chapter of differential diagnosis. The descriptions of the operative procedures are quite clear.

Two criticisms of the book arise in the mind of the reviewer. The statistics on operative procedures and results gathered from other clinics include only reports prior to 1940. There is little discussion of the use of low end to end resections with preservation of the sphincters. Since these procedures are enjoying increasing popularity, one might wish that they had been discussed in this volume.

E. L. B.

## SOCIETY PROCEEDINGS

### Black Hawk County

The regular monthly meeting of the Black Hawk County Medical Society was held at Black's Tea Room in Waterloo Friday, January 11, at 6:30 p.m. Paul T. O'Keefe, M.D., recently returned from overseas duty with the Army Medical Corps, told of his experiences in Germany.

At the December meeting of the Society the following officers were elected to serve during the ensuing year: Dr. Harold O. Gardner, president-elect; Dr. James F. Gerken, vice president; Dr. Charles A. Waterbury, Jr., secretary; and Dr. George C. Murphy, treasurer. Dr. Burr C. Boston, who was named president elect last year, assumed the office of president succeeding Dr. Henry A. Bender. All officers are of Waterloo.

C. A. Waterbury, Jr., M.D., Secretary

### Boone County

Members of the Boone County Medical Society were hosts at a dinner meeting Thursday evening, December 20, at seven-thirty o'clock at the Lincoln Tavern in Boone, entertaining the Boone County Hospital nurses, the board of trustees, and the county supervisors. An informal program was held following the dinner.

### Butler County

The Butler County Medical Society and Auxiliary held a dinner meeting in Allison Tuesday evening, January 15.

### Dallas-Guthrie Society

The Dallas-Guthrie Medical Society held its regular monthly meeting at the Rotary Club in Adel Thursday, January 17, at 12:15 p.m. The scientific program was comprised of an address on The Progress of Scientific Medicine by William R. Van Duzer, M.D., of Casey, president of the Society, and a talk on Intracranial Injuries by Walter D. Abbott, M.D., of Des Moines.

### Des Moines County

The Des Moines County Medical Society met at Hotel Burlington in Burlington Tuesday, January 8, at 6:30 p.m. Guest speakers of the evening were Captain James Bond of the Adjutant General's Department and Captain Rudolph J. Kutler of the Army Medical Corps, both of whom are stationed at Mayo General Hospital in Galesburg, Illinois. They discussed the Army's method of rehabilitating disabled servicemen.

### Greene County

The regular meeting of the Greene County Medical Society was held at the Greene County Hospital in Jefferson Thursday evening, January 17, at seven-thirty o'clock. The scientific program consisted of the discussion of a case of gas bacillus infection following rectal surgery, which was presented by Elvin D. Thompson, M.D., of Jefferson.

J. R. Black, M.D., Secretary

### Hardin County

At the annual meeting of the Hardin County Medical Society held in the dining room of the Eldora Memorial Hospital Thursday evening, December 27, Dr. William H. Van Tiger of Eldora was elected president for 1946. Other officers are Dr. John W. Jansonius of Eldora, vice president; Dr. Fern N. Cole of Iowa Falls, secretary; and Eastman Nuckolls of Eldora, treasurer. Guest speakers of the evening were Robert L. Parker, M.D., of Des Moines, president-elect of the Iowa State Medical Society, and Mr. Edwin M. Kingery of Des Moines, executive director of Iowa Medical Service, who discussed the medical service plan in Iowa.

### Johnson County

The Johnson County Medical Society held its regular monthly meeting in Iowa City at Hotel Jefferson, Wednesday, January 2, at 6:00 p.m. The scientific program was presented following the business meeting and it consisted of a discussion of Chest Injuries by Ralph A. Dorner, M.D., of the Department of Surgery, and Head Injuries by Robert A. Hayne, M.D., and Julius Wolkin, M.D., also of the Department of Surgery.

R. H. Flocks, M.D., Secretary

### Mills County

At a meeting of the Mills County Medical Society held Monday, December 31, at the Glenwood State School, Dr. Ward A. DeYoung of Glenwood was named president for 1946; Dr. Valentine J. Meyer of Glenwood, vice president; Dr. Thomas E. Shonka of Malvern, secretary-treasurer; and Dr. Dean W. Harman of Glenwood, delegate.

### Monona County

At the December meeting of the Monona County Medical Society held in Onawa Tuesday, December 18, election of officers was held and all 1945 officers were reelected to serve during 1946. They are Dr. Edward J. Liska of Ute, president; Dr. Paul G. Ingham of Mapleton, vice president; and Dr. Earl E.



Gingles of Onawa and Sioux City, secretary-treasurer. Guest speakers of the evening were Robert N. Larimer, M.D., and Charles T. Maxwell, M.D., of Sioux City who talked on Iowa Voluntary Sickness and Medical Insurance. The plan was discussed by the group and unanimously approved by the members present.

#### Polk County

The annual meeting of the Polk County Medical Society was held in Des Moines at the Des Moines Club Wednesday, January 16, at 6:30 p.m., with more than one hundred and fifty members and guests in attendance. Election of officers was held with the following results: Dr. Malcolm A. Royal, president-elect; Dr. Edward W. Anderson, secretary-treasurer; Dr. Joseph B. Priestley, trustee; and Dr. Douglas N. Gibson, councilor-at-large. Dr. Martin I. Olsen, named president-elect at the 1945 meeting, assumed the office of president succeeding Dr. Arthur E. Merkel. All officers are of Des Moines. The guest speaker of the evening was Frederick M. Meek, D.D., pastor of Plymouth Congregational Church in Des Moines, who gave an excellent address on You and Me.

#### Scott County

The January meeting of the Scott County Medical Society was held in Davenport at the Lend-A-Hand Club Tuesday evening, January 8, at six o'clock. Robert L. Jackson, M.D., Assistant Professor in the Department of Pediatrics at the State University of Iowa College of Medicine, discussed Pediatric Problems of Interest to the General Practitioner.

J. H. Sunderbruch, M.D., Secretary

#### Sioux County

The Sioux County Medical Society held its annual election of officers at its meeting held in Sioux Center Monday evening, December 17. Dr. Edward B. Grossmann of Orange City was named president; Dr. Marvin O. Larson of Hawarden, vice president; and Dr. Cornelius B. Murphy of Alton, secretary-treasurer.

#### Winneshiek County

At the December meeting of the Winneshiek County Medical Society the following officers were elected to serve the Society during the coming year: Dr. Reinert N. Svendsen of Decorah, president; Dr. Ralph M. Dahlquist of Decorah, vice president; Dr. Harry H. Ennis of Decorah, secretary-treasurer; and Dr. Felix A. Hennessy of Calmar, delegate.

### PERSONAL MENTION

The Journal is pleased to announce the release of the following physicians from active duty:

Dr. Asa S. Arent has resumed his practice in Humboldt after serving more than three years in the Army Medical Corps. At the time of his release, Dr. Arent held the rank of Captain.

Dr. Walter J. Balzer has received his discharge from the Army Medical Corps and has resumed his practice in Davenport with offices in the Union Bank Building. Dr. Balzer, a Captain at the time of his release, entered military service on September 1, 1942.

Dr. Maurice T. Bates has been released from active duty with the Navy Medical Corps and has resumed his practice in Des Moines in association with Dr. Frank W. Fordyce. Dr. Bates was on active duty for more than three years and at the time of his release held the rank of Lieutenant Commander.

Dr. James F. Bishop of Davenport was released from active duty with the Army Medical Corps in October 1945 and at present is taking postgraduate study in proctology. He plans, upon completion of the year's work, to return to Davenport where he will practice the specialty. Dr. Bishop, a Major at the time of his release, served fifty-four months in the Army, twenty-seven of which were spent in Alaska and the Aleutian Islands.

Dr. Earl S. Burch has resumed his practice in Dayton after more than three years of active duty with the Army Medical Corps. Dr. Burch held the rank of Captain at the time of his release.

Dr. Hubert H. Burroughs has been released from active duty as a Navy surgeon after more than three years of service, two of which were spent aboard the U.S.S. Medusa in the Pacific Theater of Operations. Dr. Burroughs served as a Lieutenant Commander in the naval hospital at Portsmouth, Virginia, just prior to his release.

Dr. John W. Caldwell has returned to Des Moines and resumed his practice in association with Dr. Edwin B. Winnett. Dr. Caldwell entered the Royal Canadian Air Force in June 1942 and at the time of his release was Squadron Leader and medical consultant for the Western Air Command.

Dr. William A. Castles has received his discharge from the Army Medical Corps and resumed his practice in Rippey. Dr. Castles, who held the rank of Major at the time of his release, recently returned from service in the Pacific Theater.

Dr. William B. Chase, Jr., of Des Moines has been released from active duty in the Navy Medical Corps and plans to resume his practice in association

#### CHANGE OF ADDRESS

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with his father some time in February. Dr. Chase was on active duty for more than three years and held the rank of Lieutenant Commander at the time he was placed on inactive status.

Dr. Dean W. Clapsaddle of Burt has received his discharge from the Army Medical Corps and has opened an office in Clear Lake for the general practice of medicine. He entered military service early in 1942 and held the rank of Captain at the time of his release.

Dr. George H. Clark has resumed his practice in Oskaloosa after having been placed on inactive status by the Navy Medical Corps. Dr. Clark, who held the rank of Lieutenant Commander at the time of his release, just recently returned from service in the Pacific Theater of Operations.

Dr. Richardson E. Clark has returned to Manchester and reestablished his medical practice in that city. Dr. Clark, a Captain at the time of his release from the Army Medical Corps, was on active duty more than three years.

Dr. Clark N. Cooper has been released from active duty with the Navy Medical Corps and has resumed his practice in Waterloo with offices in the Black Building. Dr. Cooper, a Lieutenant Commander at the time of his release, was on active duty for more than three years, much of which was spent in the Pacific Theater of Operations.

Dr. Charles H. Coughlan has resumed his association with Drs. Loran M. Martin and Herman C. Kluever in Fort Dodge after more than four and a half years of active military duty. Dr. Coughlan, a Major in the Army Medical Corps, was separated from service in December.

Dr. Abbott M. Dean has resumed his practice in Council Bluffs after having been placed on inactive status by the Navy Medical Corps. Dr. Dean, who held the rank of Commander at the time of his release, was on active duty for more than three years and just recently returned from service in the Pacific Area.

Dr. Charles E. Decker has received his discharge from the Medical Corps of the Army Air Forces after five years of active duty and has opened an office in Davenport in the First National Bank Building for the general practice of medicine. Dr. Decker held the rank of Major at the time of his release.

Dr. Kyle T. DeYarman has been separated from active duty with the Army Medical Corps and plans to resume his practice in Morning Sun. Dr. DeYarman was in military service for more than three years and at the time of his release held the rank of Captain.

Dr. Ward A. DeYoung has reopened his office in Glenwood after more than three years of service with the Army Medical Corps. Dr. DeYoung, who held the rank of Captain at the time he obtained his release, recently returned from foreign duty.

Dr. Stephen G. Dobias has received his discharge from the Army Medical Corps and is reopening his office in Chelsea the first of February. Dr. Dobias, who held the rank of Major at the time of his release, served in the Pacific Theater.

Dr. Charles V. Edwards has been released from active duty in the Navy Medical Corps and has resumed his practice of medicine and surgery at the Cogley Clinic in Council Bluffs. Dr. Edwards entered military service in July 1943 and held the rank of Commander at the time of his release.

Dr. Lancelot W. Eller, who practiced in Kanawha prior to entering military service, has been released from active duty in the Army Medical Corps and plans to take a refresher course at the University of Minnesota Medical School before re-entering medical practice. Dr. Eller, a Captain, served with a medical unit in Italy.

Dr. Olin A. Elliott has returned to Des Moines after receiving his discharge from the Army Medical Corps and plans to resume his practice in the near future. Dr. Elliott was on active duty for more than three years and at the time of his release held the rank of Captain.

Dr. Howard G. Ellis has received his discharge from the Army Medical Corps and plans to resume his practice in Des Moines in association with Dr. Earl D. McClean. Dr. Ellis, a Captain at the time of his release, entered military service over three years ago and just recently returned from the Pacific Theater.

Dr. George M. Ellison has resumed his practice in Clinton after having been released from active duty with the Army Medical Corps. Dr. Ellison, a Major, entered military service in October 1942 and served twenty-two months in the European Theater of Operations.

Dr. William I. Evans has returned to Sac City after more than three years of service with the Army Medical Corps and plans to resume his practice sometime in February. Dr. Evans held the rank of Captain at the time he received his discharge.

Dr. Charles S. Fail, just recently returned from duty in the Pacific Theater, has been placed on inactive status with the Navy Medical Reserve Corps and plans to resume his practice in Adel. Dr. Fail has been on active duty more than three years and at the time of his release held the rank of Lieutenant.



**Dr. Arthur S. Fourt** has returned to Iowa City following almost five years of active duty with the Army Medical Corps and plans to open an office sometime in February for the private practice of medicine. Dr. Fourt, a Colonel at the time of his release, served in the European Theater for almost two years.

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**Dr. Herbert Gerstman**, who was located in Marion prior to entering military service, has now received his discharge from the Army Medical Corps and has established an office in Cedar Rapids. Dr. Gerstman held the rank of Captain at the time of his release.

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**Dr. Louie Goldberg** of Des Moines has received his discharge from the Army Medical Corps after more than three and a half years of active duty and has established his office at 936 Des Moines Building. Dr. Goldberg, a Captain, recently returned from service in the Pacific Theater.

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**Dr. Louis M. Greek** has returned to Des Moines after receiving his discharge from the Army Medical Corps. He was on active duty for more than three years and held the rank of Captain at the time of his release.

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**Dr. Henry H. Gurau** has just recently received his discharge from the Army Medical Corps and plans to open an office in Des Moines to resume his eye, ear, nose and throat practice. Dr. Gurau has been in military service more than three years and held the rank of Captain at the time of his release.

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**Dr. Fred A. Hansen** has been released from active duty with the Navy Medical Corps and plans to resume his practice in Red Oak. Dr. Hansen, a Lieutenant Commander at the time of his release, entered military service over three years ago.

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**Dr. Dale D. Harris** has been released from active duty with the Navy Medical Corps and has become associated with Dr. Arthur R. Lynn of Marshalltown. Dr. Harris held the rank of Lieutenant Commander at the time he was placed on inactive status.

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**Dr. Paul O. Heitzman** of Burlington has received his discharge from the Army Medical Corps and has returned to that city to resume his practice. Dr. Heitzman, a Captain, was on active duty four years.

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**Dr. Garold G. Henning** has received his discharge from the Army Medical Corps and has returned to Milford to resume his medical practice. He has been in military service five years and was a Major at the time of his release.

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**Dr. Thomas G. Herrick**, recently returned from twenty months of service in India and Burma, has received his discharge from the Army Medical Corps and resumed his practice in Gilmore City.

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Dr. Herrick, a Captain, spent more than three and a half years in military service.

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**Dr. Nelson L. Hersey** has resumed his practice in Independence following his release from active duty with the Medical Corps of the Navy. Dr. Hersey served with the Navy for three years, eighteen months of which were spent at a base hospital in New Guinea. He held the rank of Lieutenant Commander at the time he was placed on inactive status.

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**Dr. Edward M. Honke** has returned to Sioux City and reentered the practice of urology in association with Dr. Lawrence E. Pierson. Dr. Honke, a Lieutenant Colonel, has been on active duty since the spring of 1942 and has served the entire time as head of the urologic section in a general hospital.

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**Dr. Leonard J. Hospodarsky** has received his discharge from the Army Medical Corps and has resumed his practice in Ridgeway after more than four years of active duty, several months of which were spent in the European Theater of Operations. Dr. Hospodarsky held the rank of Lieutenant Colonel at the time of his release.

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**Dr. Robert J. Johnson** has returned to Iowa Falls following his release from active duty with the Army Medical Corps and, in association with his brother Dr. William A. Johnson, has taken over the practice of Dr. Clarence M. Wray. He served as a Major in the Medical Corps and recently returned from foreign service.

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**Dr. William A. Johnson**, who practiced with his father in Alden prior to entering military service, has now received his discharge from the Army Medical Corps and has established an office in Iowa Falls in association with his brother, Dr. Robert J. Johnson. He was on active duty for more than three years and held the rank of Captain at the time of his release.

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**Dr. Lester W. Kimberly** has reopened his office in the First National Bank Building in Davenport following his release from the Army Medical Corps. Dr. Kimberly entered the service in September 1942 and at the time of his release held the rank of Major.

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**Dr. Roy G. Klockslem**, who was located in Odebolt prior to entering military service, has now been placed on inactive status in the Navy Medical Reserve Corps and plans to reenter the practice of medicine in Iowa. Dr. Klockslem, a Lieutenant Commander, was on active duty more than three years.

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**Dr. George J. Klok** has resumed his practice in Council Bluffs following his release from active duty in the Navy Medical Corps. Dr. Klok entered military service three years ago and at the time of his release held the rank of Lieutenant.

Dr. Herman C. Kluever has recently been released from active duty with the Navy Medical Corps after thirty-eight months of service and has resumed his association with Drs. Loran M. Martin and Charles H. Coughlan in Fort Dodge. Dr. Kluever served as a Commander in the Pacific Theater.

Dr. Robert C. Knott has received his discharge from the Army Medical Corps and has resumed his practice in Sioux City. Dr. Knott, a Major at the time of his release, entered military service three years ago and spent part of that time in the European Theater of Operations.

Dr. William G. Kruckenberg, who was located in Mt. Vernon prior to entering military service, has established an office in Cedar Rapids following his release from active duty with the Navy Medical Corps. Dr. Kruckenberg, a Lieutenant, had served more than three years and just recently returned from sea duty in the Pacific.

Dr. William R. Langford, who was located in Epworth prior to entering military service, has now been released from active duty and plans to reenter the practice of medicine in Iowa. Dr. Langford served with the Army Medical Corps more than three years and held the rank of Captain at the time of his release.

Dr. Emery W. Lehman has just recently received his discharge from the Army Medical Corps and plans to resume his practice in Des Moines in the near future. Dr. Lehman, a Lieutenant Colonel at the time of his release, was on active duty for more than three years.

Dr. Kenneth M. Lemon has resumed his practice in Oskaloosa following his release from active duty with the Medical Corps of the Army Air Forces. Dr. Lemon entered military service in August 1942 and held the rank of Captain at the time he received his discharge.

Dr. Donald G. Mackie has received his discharge from the Army Medical Corps and is resuming his practice in Charles City after more than three years of service, part of which was spent in the European Theater of Operations. Dr. Mackie held the rank of Captain at the time he was released from active duty.

Dr. Edwin J. Marble has returned to Marshalltown to resume his medical practice in association with his brother, Dr. Willard P. Marble, following his release from active duty in the Medical Corps of the Navy. Dr. Marble served as a Lieutenant Commander in the South Pacific.

Dr. Willard P. Marble has received his discharge from the Army Medical Corps and has resumed his practice in Marshalltown in association with his brother, Dr. Edwin J. Marble. He entered military

service more than three years ago and held the rank of Major at the time of his release.

Dr. J. Milton Margolin has resumed his practice in Perry following his release from active duty with the Army Medical Corps. Dr. Margolin, a Captain, was in service three and a half years, during which time he served with the Third Army in England, France, and Germany.

Dr. Lee R. Martin has received his discharge from the Army Medical Corps and returned to Council Bluffs where he has resumed his association with the Cogley Clinic. Dr. Martin entered military service in 1941 and at the time of his release held the rank of Captain.

Dr. Truman M. Mast has reopened his office in Washington following his release from the Medical Corps of the Navy. Dr. Mast held the rank of Lieutenant Commander at the time he was placed on inactive duty.

Dr. Emory L. Mauritz has reopened his office in the Equitable Building in Des Moines following his release from active duty with the Army Medical Corps. Dr. Mauritz, a Captain, was in military service more than three years and just recently returned from the European Theater of Operations.

Dr. Edwin B. McConkie was released from active duty with the Army Medical Corps on January 5 and has resumed his practice in the Merchants National Bank Building in Cedar Rapids. Dr. McConkie, a Lieutenant Colonel at the time he received his discharge, entered military service in July 1941.

Dr. John D. McDaniel has returned to Marengo and reopened his office after three and a half years of military service. Dr. McDaniel, who held the rank of Captain at the time of his release, served more than two years with the Army Medical Corps in the Pacific Area.

Dr. Raymond I. McGilvra, who practiced in Guthrie Center prior to entering the Medical Corps of the Navy, has now been placed on inactive status. Dr. McGilvra was on active duty for more than three years and at the time of his release held the rank of Lieutenant.

Dr. Jesse H. McNamee has reopened his office in the Equitable Building in Des Moines after more than three years of service with the Medical Corps of the Navy. Dr. McNamee, a Commander, was placed on inactive status following his recent return from duty in the Pacific.

Dr. Byron M. Merkel of Des Moines has received his discharge from the Medical Corps of the Army Air Forces after being on active duty since September 1941. Dr. Merkel, a Lieutenant Colonel at the time of his release, is taking postgraduate work



and plans to resume his practice in Des Moines about March 1.

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Dr. Donald F. Miller has resumed his practice in Williamsburg following his release from active duty with the Medical Corps of the Navy. Dr. Miller was placed on inactive status after more than three years of service and held the rank of Lieutenant Commander at the time of his release.

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Dr. Jay R. Miller has received his discharge from the Army Medical Corps and has become associated with his father, Dr. Enos D. Miller of Wellman, in the general practice of medicine. Dr. Miller, a Captain, recently returned from Europe.

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Dr. James B. Miner, Jr., has returned to Charles City to resume his medical practice after more than three years of service with the Navy Medical Corps. Dr. Miner held the rank of Lieutenant Commander at the time of his release.

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Dr. W. Hugh Missildine, who practiced in Eagle Grove prior to entering military service, has received his discharge from the Army and has begun a two-year residency in child psychology at Johns Hopkins University School of Medicine. Dr. Missildine served as a Captain in the Medical Corps with the 25th Infantry Division in the Solomons and Philippines.

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Dr. Emil O. Muhs, who was located in Muscatine before joining the Army Medical Corps in September 1942, has now received his discharge and is locating in Greeley, Colorado, to continue his practice of medicine. Dr. Muhs, a Major, spent twenty months of his service overseas.

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Dr. James H. Murphy has received his release from active duty with the Navy Medical Corps and has returned to Des Moines to resume his medical practice. Dr. Murphy held the rank of Lieutenant at the time he was placed on inactive status.

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Dr. Carrol C. Nelson was ordered to inactive duty during December and has now resumed his practice in Red Oak. At the time of his release Dr. Nelson held the rank of Lieutenant Commander in the Medical Corps of the Navy.

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Dr. Robert Y. Netolicky has resumed his practice in Cedar Rapids following his release from active duty with the Medical Corps of the Navy. Dr. Netolicky was placed on inactive status after three years of service and at the time of his release held the rank of Lieutenant Commander.

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Dr. Harold N. Neu, who practiced in Sac City prior to the time he entered military service in 1941, has received his discharge and has gone to New York City where he plans to spend five months in post-graduate study. Following that he will locate in Omaha, Nebraska, where he will practice medicine

and teach part time at Creighton University School of Medicine. Dr. Neu held the rank of Lieutenant Colonel at the time of his release from the Army Medical Corps.

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Dr. Robert J. Neufeld of Davenport has received his discharge from the Army Medical Corps and reopened the office of his father, the late Dr. Frank Neufeld, at 1506 West Third Street. Dr. Neufeld, who held the rank of Captain at the time of his release, has been in service since July 1942 and just recently returned to the States from New Guinea.

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Dr. Robert W. Newman has been placed on inactive status by the Navy Medical Corps and plans to resume his duties at the University Hospitals in Iowa City. Dr. Newman, a Commander at the time of his release from active duty, is a veteran of both the Sicilian and Italian campaigns and received the Navy commendation ribbon for "meritorious achievement under combat conditions" during the first amphibious strike at Sicily.

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Dr. Paul T. O'Keefe has resumed his practice in Waterloo following his release from active duty with the Army Medical Corps. Dr. O'Keefe, a Captain at the time he received his discharge, entered the service more than three years ago.

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Dr. George L. Parkin, who was located at the University Hospitals in Iowa City prior to entering military service, has now received his discharge from the Army Medical Corps. Dr. Parkin was on active duty for more than two years and held the rank of Captain at the time of his release.

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Dr. George A. Paschal, who practiced in Williams before he reported for active duty with the Army Medical Corps, has announced the opening of his office in Webster City following his release from the Army. Dr. Paschal held the rank of Captain at the time he received his discharge.

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Dr. Roy A. Patterson has resumed his practice in Webster City following his release from active duty with the Navy Medical Corps. Dr. Patterson, a Lieutenant Commander, was placed on inactive status after three and a half years of service.

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Dr. Conan J. Peisen, just recently returned from service in the European Theater, has received his discharge from the Army Medical Corps and plans to resume his practice in Des Moines in the near future. Dr. Peisen has been on active duty for more than three years and at the time of his release held the rank of Major.

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Dr. Allan B. Phillips has returned to Des Moines following his release from active duty with the Navy Medical Corps and has resumed his practice in association with Dr. Thomas A. Burcham. Dr. Phillips served with the Medical Corps of the Navy

for four and a half years and held the rank of Lieutenant Commander at the time he received his release.

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**Dr. Robert A. Powell** has resumed his practice in Farragut after receiving his release from active duty with the Medical Corps of the Navy. Dr. Powell was a Lieutenant at the time he was placed on inactive status.

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**Dr. Joseph B. Priestley** of Des Moines has received his discharge from the Army Medical Corps and has reopened his office in the Equitable Building where he will continue his practice of surgery. Dr. Priestley reported for active duty in September 1942 and held the rank of Lieutenant Colonel at the time of his release.

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**Dr. Joseph L. Ptacek** has resumed his practice in Webster City following his release from active duty with the Medical Corps of the Army Air Forces. Dr. Ptacek, a Captain, was in service three and a half years, twenty-three months of which he spent as a flight surgeon with the 9th Air Force in England, France, and Germany.

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**Dr. Leonard P. Ristine** has received his discharge from the Army Medical Corps and has returned to his duties as Superintendent of the State Hospital in Mount Pleasant. Dr. Ristine, a Major, was in service more than three years, the major portion of which was spent in the European Theater of Operations.

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**Dr. Van C. Robinson** of Des Moines has received his discharge from the Medical Corps of the Army Air Forces and has resumed his practice of obstetrics and gynecology in association with Dr. Lawrence E. Kelley. Dr. Robinson was on active duty for more than three years and at the time of his release held the rank of Major.

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**Dr. Maurice J. Rotkow** has returned to Des Moines and has reopened his office in the Equitable Building following his release from the Army Medical Corps. Dr. Rotkow was on active duty for more than three years and held the rank of Captain at the time he received his discharge.

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**Dr. Charles J. Schueller** of Dubuque has received his discharge from the Army Medical Corps and has resumed his practice in association with Dr. Alfred B. Nesler. Dr. Schueller was on active duty three years, thirty months of which were spent in Africa and Italy. He was a Captain at the time of his release.

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**Dr. John J. Shurts** has received his discharge from the Army Medical Corps and is locating in Eldora where he will be associated with his father-in-law, Dr. David M. Nyquist. Dr. Shurts, a Captain, has been in service three and a half years.

**Dr. Harold F. Smith** has returned to Iowa City to resume medical practice with his brother, Dr. J. Ned Smith, following his release from active duty with the Medical Corps of the Navy. Dr. Smith, a Commander, spent three and a half years in service, the last fourteen months of which were with the amphibious forces in the Pacific Fleet.

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**Dr. Charles R. Sokol** has received his discharge from the Army Medical Corps and has located in State Center where he is associated with Dr. Byron M. Biersborn. Dr. Sokol, a Major at the time of his release, was in military service five years.

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**Dr. Pearl E. Somers** has resumed his practice in Grinnell after receiving his discharge from the Army Medical Corps. Dr. Somers was on active duty over three years and held the rank of First Lieutenant at the time of his release.

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**Dr. Aral C. Sorenson** has returned to Davenport following his release from the Navy Medical Corps and has resumed his practice in the Union Bank Building. Dr. Sorenson reported for active duty in April 1942 and spent the last fifteen months of his service in Honolulu. He held the rank of Commander at the time he was placed on inactive status.

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**Dr. Floyd A. Springer** has reopened his office in the Equitable Building in Des Moines after receiving his release from active duty with the Navy Medical Corps. Dr. Springer, a Commander, was in military service more than three years.

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**Dr. Martin O. Stauch** has resumed his practice in Whiting after receiving his discharge from the Army Medical Corps. Dr. Stauch held the rank of Major at the time of his release.

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**Dr. George A. Sywassink** has received his discharge from the Army Medical Corps and has returned to Muscatine to resume his medical practice. Dr. Sywassink served as a Lieutenant Colonel in the China-Burma-India Theater.

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**Dr. Francis X. Tamisiea** has resumed his practice in Missouri Valley after having received his discharge from the Army Medical Corps. Dr. Tamisiea, who held the rank of Captain at the time of his release, recently returned from service in the European Theater.

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**Dr. V. Stanley Todd**, who was located in Eldora prior to his entry into military service, has now received his discharge from the Army Medical Corps and is taking a three months' refresher course at the University Hospitals in Iowa City before resuming his medical practice. Dr. Todd, a Captain, recently returned from service in the Pacific Theater.

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**Dr. Ray E. Trussell** has been released from active duty with the Army Medical Corps and has taken up his duties in the Medical Laboratories at the



State University of Iowa. Dr. Trussell held the rank of Major at the time he received his discharge.

Dr. Eugene F. Van Epps has received his discharge from the Army Medical Corps and plans to resume his practice of pediatrics in Clinton following the completion of a refresher course at the State University of Iowa. Dr. Van Epps entered military service in August 1942 and held the rank of Captain at the time of his release.

Dr. A. Roy Wanamaker has returned to Hamburg and plans to resume his medical practice there. Dr. Wanamaker reported for active duty with the Army Medical Corps over three years ago and just recently returned from service in the Aleutians. He held the rank of Major at the time he received his discharge.

Dr. Harry B. Weinberg of Davenport has received his discharge from the Army Medical Corps and has reopened his office in the Union Bank Building. Dr. Weinberg reported for active duty in November 1940 and has served since June 1944 as chief of the cardiovascular section of the 133rd General Hospital in New Guinea and the Philippines. He held the rank of Lieutenant Colonel at the time of his release.

Dr. Gabriel S. Westly, who was reported in the January issue as having received his discharge from the Army Medical Corps, has stated that he did not receive a discharge but expected to be retired from the service on February 2. On November 8, 1945, he was promoted to a Lieutenant Colonel in the Medical Corps.

Dr. William N. Whitehouse has resumed his practice in Ottumwa following his release from active duty with the Navy Medical Corps. Dr. Whitehouse spent over three years in military service and held the rank of Commander at the time he was placed on inactive status.

Dr. Lysle H. Whitmer has resumed his practice in Wilton Junction after receiving his discharge from the Army Medical Corps. Dr. Whitmer, who held the rank of Lieutenant Colonel at the time of his release, has been on active duty more than five years.

Dr. Robert L. Williams has received his release from active duty with the Navy Medical Corps and plans to resume his practice in Lakota. Dr. Williams held the rank of Lieutenant Commander at the time he was placed on inactive status.

Dr. Dwight C. Wirtz has returned to Des Moines and reopened his office in the Bankers Trust Building for the practice of orthopedics. Dr. Wirtz, a Lieutenant Commander at the time he was released from active duty with the Navy Medical Corps, was in service more than three years.

Dr. Robert M. Wray has resumed his practice in Cedar Rapids following his release from active duty with the Army Medical Corps. Dr. Wray went into military service in October 1941 and served in the Pacific Theater after April 1942. He held the rank of Major at the time he received his discharge.

Dr. Cecil M. Zukerman of Davenport was recently released from active duty with the Army Medical Corps and has established his office in the Davenport Bank Building. Dr. Zukerman, who held the rank of Major at the time of his release, entered the service in June 1942.

The following physicians, who were previously reported released from active military duty, have announced the establishment of their offices in new locations:

Dr. James W. Lannon, who practiced in Clear Lake before joining the Army, has opened an office in the Foresters Building in Mason City.

Dr. Lester K. Leserman, who was located in Rolfe prior to his military service, has announced that he will open an office in Chicago.

Dr. Joseph J. Weyer has moved to Fort Dodge to continue his practice of medicine and will be associated there with Dr. Ernest M. Kersten. Dr. Weyer practiced in Lohrville before reporting for active duty in the Army Medical Corps.

Dr. J. Frank Aldrich, who has practiced in Shenandoah for the past forty years, has accepted the position of Medical Director at the State Hospital in Clarinda.

Dr. Russell C. Doolittle, Medical Director of The Retreat in Des Moines for the past several years, has announced his retirement from active practice. He will, however, continue to act as a member of the Board of Trustees. Dr. Herbert C. Merillat, recently discharged from the Army Medical Corps with the rank of Lieutenant Colonel, has been appointed Medical Director to succeed Dr. Doolittle. Mr. Sydney L. Macmullen, Business Manager of the Retreat for the past twenty-five years, has been named Superintendent.

Dr. Herbert W. Canfield of Baxter has announced his retirement from active practice because of ill health.

Dr. Chelsea D. Gibson, who has practiced in Lake View for the past ten years, has moved to Sac City where he has taken over the practice of Dr. Harold N. Neu.

Dr. Lee Forrest Hill of Des Moines was named president-elect of the American Academy of Pediatrics at the fourteenth annual meeting of that

group which was held recently in Detroit. He will assume office in 1947. At a December meeting of the American Board of Pediatrics Dr. Hill was appointed Secretary of the Board.

**Dr. Clarence M. Wray** of Iowa Falls retired from active practice on January 15 after forty-four years of continuous service.

#### MARRIAGE

Miss Fern Maria Rippee, daughter of Mr. and Mrs. Walter Rippee of Hartville, Missouri, and Dr. John W. Jansonius of Eldora, son of Mr. and Mrs. Fred Jansonius of Bismarck, North Dakota, were united in marriage Sunday, December 23, in the chapel of the First Methodist Church in Bloomington, Indiana. The couple will be at home in Eldora after Dr. Jansonius completes the six-month refresher course which he is taking in Chicago. He was recently released from active duty with the Army Medical Corps.

#### DEATH NOTICES

**Bailey, John William**, of Des Moines, aged sixty-three, died January 16 of a heart attack. He was graduated in 1905 from the State University of Iowa College of Medicine, and at the time of his death was a member of the Polk County and Iowa State Medical Societies.

**Bridge, Barton Brewer**, of Albert City, aged seventy-four, died December 23 as the result of injuries received in an automobile accident December 2. He was graduated in 1900 from Queen's University Faculty of Medicine, Kingston, Ontario, Canada, and at the time of his death was a life member of the Buena Vista County and Iowa State Medical Societies.

**Everson, Gustave Adolph**, of Rolfe, aged sixty-one, died January 6 of a heart attack. He was graduated in 1910 from the Keokuk Medical College, College of Physicians and Surgeons, and at the time of his death was a member of the Pocahontas County and Iowa State Medical Societies.

**Grant, Cecil Charles**, of Cedar Falls, aged fifty-eight, died January 14 of complications following influenza. He was graduated in 1914 from the Chicago College of Medicine and Surgery, and at the time of his death was a member of the Black Hawk County and Iowa State Medical Societies.

**Hanna, John Thomas**, of Burlington, aged fifty-five, died December 18 in Milwaukee, Wisconsin, of coronary thrombosis and bronchial pneumonia. He was graduated in 1915 from the State University of Iowa College of Medicine, and had long been a member of the Des Moines County and Iowa State Medical Societies.

**Heilman, Ernest Samuel**, of Ida Grove, aged sixty-seven, died January 8 following a stroke of

apoplexy. He was graduated in 1901 from the University of Illinois College of Medicine, and at the time of his death was a life member of the Ida County and Iowa State Medical Societies.

**Howe, Lysle Clarence**, of Muscatine, aged sixty-eight, died January 6 of injuries sustained in an automobile accident December 26. He was graduated in 1903 from the Keokuk Medical College, College of Physicians and Surgeons, and at the time of his death was a member of the Muscatine County and Iowa State Medical Societies.

**Mercer, Clifford David**, of West Union, aged sixty-one, died December 25 of coronary occlusion following an illness of five years. He was graduated in 1908 from Northwestern University Medical School, and at the time of his death was a life member of the Fayette County and Iowa State Medical Societies.

**Newell, William Carl**, of Ottumwa, aged sixty-nine, died January 18 following a short illness. He was graduated in 1899 from Marion-Sims College of Medicine in St. Louis and in 1900 from Barnes Medical College, and at the time of his death was a member of the Wapello County and Iowa State Medical Societies.

**Reed, Roe Bernard**, of Clearfield, aged forty-four, died suddenly December 20 of a heart attack. He was graduated in 1927 from the State University of Iowa College of Medicine, and at the time of his death was a member of the Taylor County and Iowa State Medical Societies.

**Sult, William Franklin**, of Gilman, aged seventy-seven, died January 14 of a heart attack. He was graduated in 1892 from Drake University College of Medicine, and at the time of his death was a member of the Marshall County and Iowa State Medical Societies.

**Werts, Charles Martel**, of Des Moines, aged sixty-nine, died January 4 of leukemia. He was graduated in 1902 from the State University of Iowa College of Medicine, and at the time of his death was a life member of the Polk County and Iowa State Medical Societies.

**Hall, Carl Bertram, Captain, M.C., A.U.S.**, of Dubuque, aged thirty-four, died at Camp Kilmer, New Jersey, January 4, 1946. He was graduated in 1937 from Northwestern University Medical School, and at the time of his death was a member of the Dubuque County and Iowa State Medical Societies. Captain Hall had just returned to the States from service in China and India.



# The JOURNAL

of the

## Iowa State Medical Society

VOL. XXXVI

DES MOINES, IOWA, MARCH, 1946

No. 3

### IOWA STATE MEDICAL SOCIETY

Organized in 1850

## Ninety-Fifth Annual Session

Des Moines, Iowa, April 18 and 19, 1946

Do not fail to register. Registration Bureau—Hotel Fort Des Moines,

### PROGRAM OF GENERAL SESSIONS

#### Thursday Morning, April 18

9:00 a. m.

Main Ball Room

##### Opening Exercises

###### Greetings—

MARTIN I. OLSEN, M.D., President,  
Polk County Medical Society

###### Response—

GEORGE H. SCANLON, M.D., First  
Vice President, Iowa State Medical  
Society

##### Address—

###### Infectious Hepatitis

WILLIAM S. MIDDLETON, M.D., Dean  
and Professor of Medicine, Univer-  
sity of Wisconsin Medical School,  
Madison

##### Recess to Visit Exhibits

##### Address—

###### Veterans Administration Program

MAJOR GENERAL PAUL R. HAWLEY,  
M.C., Surgeon General, Veterans  
Administration, Washington, D. C.

##### Address—

Diagnosis, Cause and Treatment of  
Endolymphatic Hydrops  
(Ménière's Disease)

HENRY L. WILLIAMS, M.D., Assist-  
ant Professor of Otolaryngology  
and Rhinology, University of Min-  
nesota Graduate School, Minneap-  
olis-Rochester

9:00-9:15

##### Address—

###### War Wounds of the Abdomen

HENRY H. SEARLS, M.D., Associate  
Professor of Surgery, University of  
California Medical School, Berkeley-  
San Francisco

##### Address—

Recent Developments in Hospital Or-  
ganizations and Medical Practice That  
May Affect the Future

WILLIAM A. O'BRIEN, M.D., Profes-  
sor of Public Health and Director of  
Postgraduate Medical Education,  
University of Minnesota Medical  
School, Minneapolis

##### Recess to Visit Exhibits

##### Address—

The Doctor's Role in the Postwar  
World

FRANK L. FEIERABEND, M.D., Kansas City

Report of House of Delegates and Instal-  
lation of President

#### Friday Morning, April 19

9:00 a. m.

Main Ball Room

9:00-9:45

9:45-10:15

10:15-10:30

10:30-11:00

11:00-11:30

## SECTION MEETINGS

## Medical Section

Willis M. Fowler, M.D., Iowa City, Chairman

## Thursday Afternoon, April 18

2:00 p. m.

## Main Ball Room

- Ruptured Intracranial Aneurysms 2:00-2:30  
 ADOLPH L. SAHS, M.D., Iowa City  
 Discussers:  
 HAROLD W. MORGAN, M.D., Mason City  
 WILLIAM E. ASH, M.D., Council Bluffs

- Thiouracil in the Treatment of Graves' Disease 2:30-3:00  
 HORACE M. KORNS, M.D., Dubuque  
 Discussers:  
 LYLE CARR, M.D., Iowa City

- Malaria as a Postwar Problem 3:00-3:30  
 EDWARD W. PAULUS, M.D., Iowa City  
 Discussers:  
 KENNETH M. BRINKHOUS, M.D., Iowa City  
 HERMAN J. SMITH, M.D., Des Moines

- The Management of Diabetic Acidosis and Coma 3:30-4:00  
 LESLIE W. SWANSON, M.D., Mason City  
 Discussers:  
 MATTHEW T. MORTON, M.D., Estherville  
 FRED STERNAGEL, M.D., West Des Moines

- Streptococcic Pneumonia 4:00-4:30  
 JULIAN E. MCFARLAND, M.D., Ames  
 Discussers:  
 FREDERICK W. MULSOW, M.D., Cedar Rapids  
 ARTHUR D. WOODS, M.D., State Center

## Friday Afternoon, April 19

2:00 p. m.

## South Ball Room

- Atypical (Virus) Pneumonia 2:00-2:30  
 Clinical Aspects  
 BENJAMIN F. WOLVERTON, M.D., Cedar Rapids  
 Roentgenologic Aspects  
 WAYNE K. COOPER, M.D., Cedar Rapids  
 Discussers:

- GEORGE B. CROW, M.D., Burlington  
 Modern Aspects of the Treatment of Tuberculosis 2:30-3:00  
 WILLIAM M. SPEAR, M.D., Oakdale  
 Discussers:  
 JOHN C. PARSONS, M.D., Des Moines  
 DANIEL R. WEBB, M.D., Cedar Rapids

- The Treatment of Cardiac Emergencies 3:00-3:30  
 HERBERT W. RATHE, M.D., Waverly  
 Discussers:  
 ROBERT N. LARIMER, M.D., Sioux City  
 ALBERT A. SCHULTZ, M.D., Fort Dodge

- Clinical Significance of the Rh Factor 3:30-4:00  
 ELMER L. DEGOWIN, M.D., Iowa City  
 Discussers:  
 FRED H. LAMB, M.D., Davenport  
 ALLEN C. STARRY, M.D., Sioux City

- The Medical Management of Complications of Peptic Ulcer  
 WILLIAM D. PAUL, M.D., Iowa City  
 Discussers:  
 FERN N. COLE, M.D., Iowa Falls  
 JOHN R. STRAWN, M.D., Des Moines

## Surgical Section

Walter D. Abbott, M.D., Des Moines, Chairman

## Thursday Afternoon, April 18

2:00 p. m.

## South Ball Room

- Reconstructive Surgery of the Upper Extremities 2:00-2:30  
 MAJOR JOSEPH E. MILGRAM, M.C., Clinton

- Anesthesia 2:30-3:00  
 LAWRENCE A. BLOCK, M.D., Davenport  
 Discussers:  
 E. PARISH LOVEJOY, M.D., Des Moines

- Pyuria 3:00-3:30  
 WAYLAND K. HICKS, M.D., Sioux City  
 Discussers:  
 ROBERT J. NELSON, M.D., Clinton

- Plastic Surgery 3:30-4:00  
 ARAL C. SORENSON, M.D., Davenport  
 Discussers:  
 DONOVAN F. WARD, M.D., Dubuque

- Lower Extremity Amputations: The Definitive Treatment and Postoperative Care 4:00-4:30  
 JOSEPH B. PRIESTLEY, M.D., Des Moines  
 Discussers:  
 CLARK N. COOPER, M.D., Waterloo  
 To be followed by a movie on the last subject.

## Friday Afternoon, April 19

2:00 p. m.

## Main Ball Room

- Thyroid Disease 2:00-2:30  
 HENRY H. SEARLS, M.D., San Francisco  
 Discussers:  
 LESTER D. POWELL, M.D., Des Moines

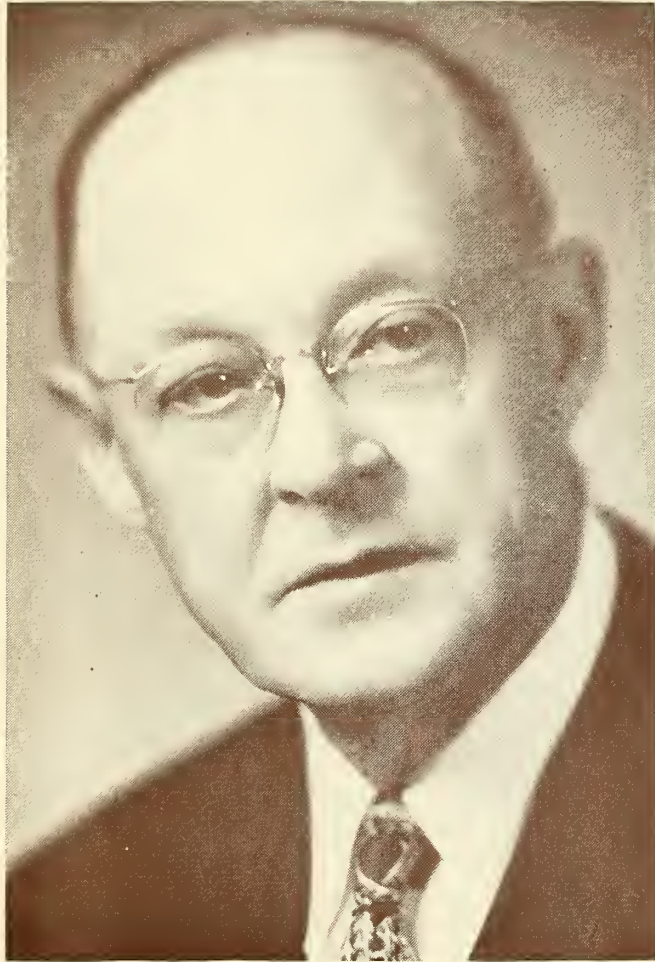
- Acute Conditions of the Abdomen 2:30-3:00  
 FRANK R. PETERSON, M.D., Iowa City  
 Discussers:  
 JAMES J. NOONAN, M.D., Marshalltown

- The Treatment of Shock 3:00-3:30  
 ROBERT C. HARDIN, M.D., Iowa City  
 Discussers:  
 J. PHILIP COGLEY, M.D., Council Bluffs

- The Use of the Sulfonamides in Surgery 3:30-4:00  
 WILBUR C. THATCHER, M.D., Fort Dodge  
 Discussers:  
 BERNARD C. BARNES, M.D., Des Moines

- Burns 4:00-4:30  
 HOWARD I. DOWN, M.D., Sioux City  
 Discussers:  
 DRAPER L. LONG, M.D., Mason City





Ransom D. Bernard

President

Iowa State Medical Society

1945-1946





# OUR GUESTS



WILLIAM A. O'BRIEN, M.D.  
Minneapolis



WILLIAM S. MIDDLETON, M.D.  
Madison



HENRY L. WILLIAMS, M.D.  
Rochester

## Eye, Ear, Nose and Throat Section

Henry A. Bender, M.D., Waterloo, Chairman

### Thursday Morning, April 18

9:30 a. m.

The Ranch

Cavernous Sinus Thrombosis 9:30-10:00

DEVÖE O. BOVENMYER, M.D., Ottumwa

Discusser:

ORAL L. THORBURN, M.D., Ames

A Survey on the Uses of Penicillin in

Diseases of the Eye

MERRILL O. EIEL, M.D., Osage

Discusser:

JOHN A. THORSON, M.D., Dubuque

Discussion

10:30-10:45

Adjournment to Main Ball Room

10:45-11:00

Address (in Main Ball Room)

11:00-11:30

HENRY L. WILLIAMS, M.D., Rochester

### Thursday Noon, April 18

Luncheon—12:15 p. m.—The Ranch

### Thursday Afternoon, April 18

2:00 p. m.

The Ranch

Headache from the Standpoint of the  
Rhinologist

2:00-2:30

HENRY L. WILLIAMS, M.D., Rochester

Orthoptic Training

2:30-3:00

HAROLD O. GARDNER, M.D., Waterloo

Discusser:

RAYMOND J. STEPHEN, M.D., Cedar Rapids

Cataract Surgery During 1945

3:00-3:30

JOSEPH E. DVORAK, M.D., Sioux City

Discusser:

JESSE H. MCNAMEE, M.D., Des Moines

Papilledema

3:30-3:50

PLACIDUS J. LEINFELDER, M.D., Iowa City

Interpretation of Functional Hearing

Tests

3:50-4:10

SCOTT N. REGER, Ph.D., Iowa City

Aviation Deafness

4:10-4:30

BYRON M. MERKEL, M.D., Des Moines

## SECTION MEETINGS

## Pediatric Section

Lee F. Hill, M.D., Des Moines, Chairman

Thursday' Afternoon, April 18

1:30 p. m.

Blank Memorial Hospital

Tour of Hospital	1:30-2:00
Growth Disturbances in Children:	
Clinical Demonstration	2:00-2:30
JULIAN D. BOYD, M.D., Iowa City	
Erythroblastosis Fetalis: Case	
Presentation	2:30-2:50
DENNIS H. KELLY, M.D., Des Moines	
Subdural Hematoma in Infancy: Dem-	
onstration of Two Cases	2:50-3:10
CHARLOTTE FISK, M.D., Des Moines	
Postinfectious Hemorrhagic Nephritis:	
Case Demonstration	3:10-3:30
JAMES E. DYSON, M.D., Des Moines	
Hydronephrosis	3:30-3:50
ARNOLD M. SMYTHE, M.D., Des Moines	
Fibrocystic Disease of the Pancreas:	
Case Report	3:50-4:10
LEE F. HILL, M.D., Des Moines	
Discussion	4:10-4:30

American College of  
Chest Physicians

## North Midwest Chapter

J. Carl Painter, M.D., Dubuque, President

Thursday Afternoon, April 18

12:15 p. m.

Dining Rooms 1 and 2

Luncheon	12:15
Pulmonary Abscess	2:00-2:20
JOHN C. PARSONS, M.D., Des Moines	
Lung Resection in Pulmonary	
Tuberculosis	2:20-2:50
OSCAR T. CLAGETT, M.D., Rochester	
Discusser:	
RALPH A. DORNER, M.D., Iowa City	
Tracheobronchial Tuberculosis	2:50-3:20
SUMNER COHEN, M.D., Minneapolis	
Evaluation of Case-Finding Program	
in Iowa	3:20-3:40
LEON H. FLANCHER, M.D., Des Moines	

## Orthopedic Section

Everett M. George, M.D., Des Moines, Chairman

Friday Afternoon, April 19

2:00 p. m.

Blank Memorial Hospital

Reconstructive Surgery of the Lower	
Extremities	2:00-2:30
MAJOR JOSEPH E. MILGRAM, M.D., Chief, Ortho-	
pedic Section, Army Service Forces, Schick	
General Hospital, Clinton	
Surgical Treatment of War Injuries of	
the Hand in the U. S. Army	2:30-3:00
LT. COL. JULIAN M. BRUNER, M.C., El Paso	
Present Day Concepts of Fracture	
Management	3:00-3:30
DONALD C. CONZETT, M.D., Dubuque	
Recent Advances in Operative Treatment	
for Transcervical and Intertrochanteric	
Fractures of the Hip	3:30-4:00
ARCH F. O'DONOGHUE, M.D., Sioux City	
New Operative Procedure for Correcting	
Foot Drop Deformities	4:00-4:30
F. EBERLE THORNTON, M.D., Des Moines	

## Obstetric Section

Robert M. Collins, M.D., Council Bluffs, Chairman

Friday Afternoon, April 19

2:00 p. m.

The Ranch

Demonstrations (on mannequin)	2:00-4:30
Simple Low Forceps—Scanlon's Man-	
euver — Kjelland Forceps — Version	
and Breech	
Presented by:	
JOHN D. LUTTON, M.D., Sioux City	
M. R. KELBERG, M.D., Sioux City	
ADDISON W. BROWN, M.D., Des Moines	
VAN C. ROBINSON, M.D., Des Moines	
FLOYD W. RICE, M.D., Des Moines	
OLIN A. ELLIOTT, M.D., Des Moines	
CECIL W. SEIBERT, M.D., Waterloo	
DRAPER L. LONG, M.D., Mason City	
WALTER J. BALZER, M.D., Davenport	
ROY I. THEISEN, M.D., Dubuque	
CHARLES S. DAY, M.D., Cedar Rapids	
LAWRENCE G. CARRIG, M.D., Cedar Rapids	
OTTO N. GLESNE, M.D., Fort Dodge	
WILLIAM N. WHITEHOUSE, M.D., Ottumwa	
WILLIS E. BROWN, M.D., Iowa City	
DAVID WALL, M.D., Ames	
Moving pictures of obstetric procedures.	



## Scientific Luncheons

These luncheons are open to any physician desiring to attend. Tickets will be on sale at registration desk in lobby.

Thursday, April 18

South Ball Room

12:15 p. m.

Veterans Administration Problems as They Affect Iowa

MAJOR GENERAL PAUL R. HAWLEY, M.C.,  
Washington

Thursday, April 18

The Ranch

12:15 p. m.

Eye, Ear, Nose and Throat Section Luncheon

Thursday, April 18

Dining Rooms 1 and 2

12:15 p. m.

American College of Chest Physicians

Friday, April 19

South Ball Room

12:15 p. m.

Old Age Assistance and Needy Blind Program  
CHANNING SMITH, M.D., Medical Consultant,  
State Board of Social Welfare

Friday, April 19

Dining Room 2

12:15 p. m.

Iowa Anesthesiological Association  
Use of Sodium Pentothal with Curare and Nitrous Oxide

RALPH T. KNIGHT, M.D., Minneapolis  
Economics of Anesthesiology

## Evening Meetings

Thursday, April 18

Dining Rooms 1 and 2

6:00 p. m.

Iowa Pathological Society

Thursday, April 18

Main Ball Room

8:00 p. m.

There will be an open meeting Thursday evening, with an outstanding speaker. This program will be of great interest to all physicians and their wives. Details will be announced later.

## House of Delegates

First Meeting, Wednesday Evening, April 17

8:00 p. m.

South Ball Room—Hotel Fort Des Moines

Roll Call

Approval of Minutes of Thursday Morning Session, 1945

Reports of Officers

Reports of Committee Chairmen

Memorials and Communications

New Business

Election of Committee on Nominations

Second Meeting (Time and Place to be determined at first meeting)

Roll Call

Reading of Minutes

Report of Committee on Nominations

Election of Officers

Reports of Committees

Unfinished Business

New Business

Announcement of Committees

Adjournment

## State Society of Iowa Medical Women

and

AMERICAN MEDICAL WOMEN'S  
ASSOCIATION—Branch 19

Wednesday, April 17

Commodore Hotel—Des Moines

Dinner—6:30 p. m.

The dinner will honor Dr. Helen Johnston, president-elect of the American Medical Women's Association.

Following dinner, Dr. Johnston will open her home for the meeting, at which time she will give a report of the mid-year board meeting, a business meeting will be held, and scientific papers will be presented.

## Iowa Medical Service

The first annual meeting of Iowa Medical Service, to which all participating physicians are invited, will be held Wednesday afternoon, April 17, at two o'clock in the South Ball Room of the Hotel Fort Des Moines. A new board of directors will be elected, and reports of officers and committees will be made to those present. The new board will meet to form its organization following the annual meeting.

# WOMAN'S AUXILIARY to the Iowa State Medical Society

Organized May 9, 1929, Des Moines, Iowa  
SEVENTEENTH ANNUAL MEETING

Headquarters—Hotel Kirkwood  
Des Moines, Iowa

## PROGRAM

Wednesday, April 17

12:30 p. m. Luncheon, Hotel Kirkwood  
2:00 p. m. Executive Board Meeting, Hotel Kirkwood  
For Board Members and County Auxiliary Presidents

Thursday, April 18

Hotel Kirkwood  
9:30 a. m.

Mrs. S. S. Westly, President, presiding  
Invocation—  
Address of Welcome—  
    MRS. GEORGE H. WATTERS, President, Polk County Woman's Auxiliary  
Response—  
    MRS. M. H. BRINKER, Jefferson, President-Elect  
Reading of Minutes of Last Meeting—  
Announcement of Committees—  
Report of President—  
Reports of State Officers—  
Reports of Standing Committees—  
Reports of County Presidents—  
Announcements—  
Report of Registration—  
Unfinished Business—  
New Business—  
Memorial Service—  
Music—  
Adjournment—

An open meeting will be held Thursday evening, April 18, at the Hotel Fort Des Moines to which all Auxiliary members are invited. An outstanding speaker will be presented.

Thursday Noon, April 18

Luncheon—12:30 p. m.—Hotel Kirkwood

Greetings—  
    R. D. BERNARD, M.D., Clarion  
    President, Iowa State Medical Society  
Greetings—  
    ROBERT L. PARKER, M.D., Des Moines  
    President-Elect, Iowa State Medical Society  
Address—  
    MRS. DAVID W. THOMAS, Lock Haven, Pennsylvania  
    President, Woman's Auxiliary to the American Medical Association  
A Cancer Program for Iowa  
    MRS. C. V. MCCARTHY, Commander, Field Army  
    of the American Cancer Society  
Reading of Minutes—  
Report of Resolutions Committee—  
Report of Nominating Committee—  
Election of Officers—  
Installation of Officers—  
Election of Delegates to National Convention—  
Adjournment—

Postconvention Board Meeting  
3:30 p. m.

This program, social and business, is for all visiting women. All eligible women are urged to become members. Wives of doctors in service are invited.

Food is still an important item. Upon arrival in Des Moines, please register and make your reservation for luncheon.



## CHINESE NATIVE OPHTHALMOLOGY

OTIS S. LEE, JR., M.D., Iowa City

## A BRIEF HISTORICAL SKETCH

The practice of ophthalmology in China according to legend may be traced back 4,000 years to the prehistoric time of the three legendary rulers.\* It is claimed that during the reign of Emperor Huang Ti (Fig. 1) circa 2679 B.C., acupuncture or needling, the most important of all treatments of eye diseases, was originated.

The first reliable source of information on Chinese ophthalmology, however, is the Tsu Wu Ching (The Importance of Needling) published during the Han dynasty, 250 B.C. It was the work (circa 255 B.C.) of Pien Chueh (Fig. 2), who set himself up as a specialist on diseases of the eye and ear in Lo-Yang, and is considered to be the first ophthalmologist in China. During the Han dynasty, 206 B.C.—220 A.D., Chinese medicine attained a high degree of development. Three of the greatest medical men in Chinese history were born during this time. Among the many valuable books published during this period was the Nei Ching (Internal Classics). In it were recorded many symptoms of eye diseases such as blindness, photophobia, squint, and red eyes.

Chang Chung-Ching (Fig. 3), Sage of Medicine and one of the three great men of this period (the other two being Hua Tao, God of Surgery, and Chun Yu-i), described in his medical writings various ophthalmic signs and symptoms such as lacrimation, exophthalmos, and impairment of vision. These were considered merely local manifestations of general diseases.

The first books on ophthalmology were published in the Sui dynasty, 589-618 A.D. Tao's Recipe for Eye Diseases and Kan Tsun-Cheh's Recipe for Eye and Ear Diseases were mentioned in the Sui-Shu. The first book on symptomatology in China was also written in this period by Chao Yuan Fang, 610 A.D., known as Chao Shin Ping Yuan, and a volume was devoted to the eye. Thirty-eight different eye diseases were classified in this book.

Through the influence of Buddhism, Indian medicine was introduced into China during the Tang dynasty, 618-907 A.D. Three very famous works were published during this period, all showing the influence of Indian medicine:

1. The Wai Tai Mi Yao (Medical Secrets of an Official), an extensive work on medicine writ-

ten by Wang Tao in 752 A.D., included a volume on ophthalmology by Hsieh Tao Jen, a Buddhist who studied medicine under an Indian monk. The Indian theory of four elements (air, water, fire, wind) was mentioned and nineteen eye diseases were recorded. Conjunctivitis, cataract, night blindness, glaucoma, trichiasis, as well as an operative method for cataract, were described.

2. Lung Shu Lun (Discussions of Lung Shu) written by an Indian Bodisatva recorded seventy-two eye diseases. Many Persian therapeutic recipes were quoted. The descriptions of diseases



Fig. 1. Huang Ti.

and treatments were more accurate than those of the preceding work and it was used as a textbook of ophthalmology for the next three hundred years.

3. Yin Hai Ching Wei (The Exhaustive and Comprehensive Survey of Silver Sea) said to have been written by Sun Ssu Miao (Fig. 4) 581-682 A.D., was among the best known volumes on eye diseases ever written in China. In it the theories of Wu Lun and Pa Kuo were propounded and became very popular. They formed the foundation upon which the later teaching of ophthalmology was based and these theories hold among native ophthalmologists to this day.

Medical education was first started during this dynasty. Medicine was divided into five classes

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\*Fu Hsi, Sheng Nung, Huang Ti.



and one of the five was diseases of the eye and ear.

The only contribution worthy of note in the Sung dynasty, 960-1127 A.D., was a ten volume work by Pao Kuang Tao Jen, named Lung Mu Lun. In it seventy-two eye diseases were described.

A compilation of books was the chief contribution of the Ming dynasty, 1352-1646 A.D. Best known among ophthalmic works were (1) Ching Chih Chun Shing (Standard Medical Book on Diseases and Therapeutics) by Wang Ken Tang in 1598 in which 172 eye diseases and their treatments were recorded, (2) Wang Hsieh's Yen Ki Chuan Shu (Complete Ophthalmology) and (3) Fu Jen Yu's Yen Ki Ta Chuan (Comprehensive Ophthalmology).

In the last dynasty before the present Republic, the Ching dynasty, 1623-1911, two great encyclopedias were published. The first was Ku Chin Tu Shu Chi Cheng, or Library Collections, 1726. The section on eye diseases was included as a branch of medicine and a chapter was devoted to each of the following: Etiology and Symptoms, Prescription, Acupuncture, Moxa and Case Reports. The second was the I Tsung Chin Chien (Golden Mirror of Medicine) which devoted two volumes to eye diseases.

It was during the late Ching dynasty in 1840 that Western ophthalmology was introduced into

China by Dr. Thomas Richardson Colledge, the originator of Medical Missions in China, who organized an ophthalmic hospital in Canton. The hospital was a great success and from this date the influence of Western ophthalmology has increased in China.

#### CHINESE OPHTHALMIC CONCEPTIONS

*Physiology:* The Chinese concept of the function of the organs of the body and their ideas on the principles and practice of medicine are founded entirely on the theory of cosmogony. This theory, although over 3,000 years old, still forms the basis for the most important diagnostic and therapeutic customs practiced today. It consists primarily of a philosophic speculation that in the beginning of things there is the Wu Chi, "Extreme Limit" or "Absolute Nothing", or "Chaos". From this is evolved the Tai Chi, "Great Limit" or "Great Ultimate" or "Primordial Matter". By the continuous disunions and unions of the primordial matter, two vital essences of the universe, the spirits of Yang and Yin, are generated. The Yang and Yin form the positive and negative principle of the dualism of the Chinese theory of cosmogony. These forces are respectively creative and destructive and are constantly uniting and separating. They form the fundamental principles underlying the philosophy of the Chinese medical system. In fact all the social processes of Chinese life, civilization, and culture have their roots and origins in this theory.

In order that bodily function be performed harmoniously, the two cosmic principles of Yang and Yin must be balanced properly in the body. The organs (liver, heart, lungs, spleen, and kidneys) are dominated by the Yin principle, and the viscera (large and small intestine, bladder, gallbladder, and stomach) are dominated by the Yang principle. The organs and viscera have cognate and antipathetic functions. They act at times in affinity and at other times in opposition to each other, depending on the quantity, quality, and ceaseless ebb and flow of the two vital forces of Yang and Yin which circulate in twelve imaginary channels and exercise control over the blood vessels which are supposed to contain blood and air in varying proportions depending on the influence of the two cosmic forces. An imbalance of Yang and Yin results in disease of the internal organs. How this is associated with the eye will be explained by the theories of Wu Lun and Pa Kuo under the heading of Anatomy.

*Anatomy:* Chinese knowledge of anatomy is based chiefly on hastily observed, uncorrelated, dog-torn or crudely dissected remains of human beings and miscellaneous bones, the gaps of which



Fig. 2. Pien Chueh.



are filled conveniently by their theory of cosmogony. Chinese study of anatomy is bound by religious ideas as well as philosophic deductions, and the actual findings of accurately dissected bodies are not used as a corrective to speculative preconception. It is no small wonder, therefore, that the delicate structures of the eyeball were practically unknown to the Chinese ophthalmologist. There is no medical literature known which deals with the dissection of the eye. During the Tang dynasty (620 A.D.) two theories describing the various parts of the globe, its adnexa and their physiopathologic relationship to the rest of the body were brought to the attention of the medical profession. They were well received and have become the foundation upon which the teaching of ophthalmology is based:

1. Theory of Wu Lun (five wheels). Ocular structures are divided into five parts and each is associated functionally with some internal organ and working in close harmony with it. The parts are: the bulbar conjunctiva, cornea, upper and lower lids, inner and outer canthal regions, and the pupil. Their organic connections are the lungs, liver, spleen and liver, heart, and the kidneys respectively.

2. Theory of Pa Kuo (eight boundaries). This deals with the anatomy of the eye in much the same manner as the theory of Wu Lun. Ocular structures are divided into eight parts as follows: Nasal superior portion of bulbar conjunctiva, nasal inferior portion of bulbar conjunctiva, temporal half of bulbar conjunctiva, upper and lower lids, canthal regions, cornea, upper half of pupil, and lower half of pupil. Their respective organic and visceral connections are the lungs, bladder, small intestine, stomach and spleen, heart, liver, gallbladder, and kidneys.

In both these theories the ocular diseases were not considered to be of independent origin but always in association with and as a result of pathologic processes in the internal organs and viscera, which became diseased from local or general imbalance of the vital spirits of Yang and Yin. This may be brought on by various causes such as eating too rapidly, exposure to night air, or excessive ingestion of fish.

*Etiology:* Sun Ssu Mo, 581-682 A.D., author of the Yin Hai Ching Wei (The Exhaustive and Comprehensive Survey of Silver Sea), one of the best known of ancient Chinese books on ophthalmology, describes sixteen causes of eye diseases in his Chien Chin Fang (Thousand Precious Prescriptions). These may be grouped under three headings: diet, trauma, and sexual indulgence. A new classification of etiology of diseases was introduced during the Sung dynasty by Chen Yen,

circa 1174 A.D., and was separated into three divisions:

1. Internal causes—disturbances of the seven emotions; namely, joy, anger, grief, fear, love, hatred, and desire—which are the causes of cataract and glaucoma.

2. External causes—harmful actions of the six



Fig. 3. Chang Chung Ching.

elements; namely, wind, heat, moisture, fire, dryness, and cold—which are the causes of diseases of the conjunctiva and cornea.

3. Causes neither external nor internal include hunger, over-eating and exhaustion which give rise to ocular lesions not classified under the two foregoing categories.

*Diseases of the Eye:* Seventeen to 106 different kinds of eye diseases have been described in various ancient treatises on ophthalmology. However, many of them are descriptions of different stages of a much smaller number of diseases which may be separated into three classes:

1. Nei Chang or diseases of the internal eye. Cataract, glaucoma, and various types of amblyopia or amaurosis without visible ocular signs may be placed under this category.

2. Wei Chang or diseases of the external eye. Twenty-seven different conditions are described which include pterygium, symblepharon, various stages and types of conjunctivitis, trichiasis, entropion, and hordeolum.

3. Yi Mu or diseases of the corneal membrane. Under this may be listed pannus formation, various types of deep and superficial keratitis, and corneal scars.

A few samples taken from the list of 81 diseases described in the previously mentioned Yin Hai Ching Wei (The Exhaustive and Comprehensive Survey of Silver Sea) by Sun Ssu Mo, circa 620 A.D.,<sup>1</sup> may serve to illustrate the various ocular diseases recognized by the Chinese ophthalmologist up to that period:

1. Ta Tzu Chih Mo Chuan Ching (the coming of blood vessels from outer cornea to the eyeball). Large pterygium from temporal side of cornea. This begins as a vascular engorgement of the Chin (muscle) which gradually encroaches upon the cornea until the pupillary region is covered, resulting in blurring of vision. Patient sees objects as if through thin silk.

Etiology: Cardiac and hepatic disorders.

Treatment: Cutting of blood vessels on growth to let out poisonous blood. Medicine orally may be effective during early stages by dispersing heat of heart.

2. Mu An Sheng Hua (dull eyeball and blurring of vision). Hypermetropia. Vision of the patient becomes blurred after long use of eyes.

Etiology: Result of renal weakness which is due either to excessive sexual intercourse and heavy drinking or incomplete development of kidneys.

Treatment: Kidney tonic.

3. Lien Sheng Feng Li (windy granules of palpebral conjunctiva). Trachoma? Growth of granules resembling sago or strawberry in both upper and lower palpebral conjunctiva. Most common complications are formation of screens (ulcer? pannus?) over cornea, these being caused by abrading effects of the granules.

Etiology: Result of an increase of blood in body with overproduction (hyperactivity) of the stomach and spleen.

Treatment: Puncture, cauterization of granules and medicine taken orally.

4. Tien Hsing Chin Yen (epidemic red eyes) different forms of acute conjunctivitis. This infection is carried from one person to another through the infected poisonous air, thousands being affected at the same time. If one member of a family suffers from this disease, all others young and old will also be infected. Main symptoms are swelling of the eyeball, pain, photophobia, and blepharospasm. Condition is usually cured in five to seven days. In spite of the severe swelling and pain, the cornea and pupil are never damaged.

Treatment: Irrigation of eye five times daily with a boy's warm urine together with instillation of eye drops.

5. Tso Chi Sheng Hua (production of blossoms, "blurring of vision" on sitting up). Glaucoma? Disease begins with dizziness and blurring of vision. Flower-like objects of different colors (halo?)

appear in central field of vision. Pupil is dilated. Chronic sufferers of the disease become greenish blind (absolute glaucoma?). This is the most difficult eye disease to treat.

Etiology: An insufficient production of blood by



Fig. 4. Sun Ssu Mo.

the liver together with weakness of the gallbladder and kidney.

6. Hsueh Yi Pao Ching (bloody screen wrap up eyeball). Pannus crassus? Disease is binocular. Begins with redness of eyeball, pain and lacrimation. After repeated attacks many blood vessels spread over cornea giving it a fleshy appearance.

Etiology: Excess heat of heart and weakness of liver.

7. Hei Yi Ju Chiu (black pearl-shaped screen). Large iris prolapse with panophthalmitis? Begins with sensation of heat, lacrimation, blepharospasm, pain, after which "black screen" (prolapse of iris) suddenly makes its appearance in the cornea, shaped like a pear or pearl. Size of "black screen" varies with different cases. Its protrusion may be so great as to present itself between closed lids (total prolapse of iris) and in such a case, mobility of eyeball is limited. Patient is usually restless. Disease is binocular but one eye is first involved.

Etiology: Exhaustion of the kidney and spleen and disturbance of the seven moods.\*

Treatment: Needling prolapsed tissue which collapses after release of the "wicked fire". A powder

\*Laughter, anger, sorrow, thought, weeping, fear, and astonishment.



is then applied by which the "screen" may be made to disappear.

8. Hsieh Ching Feng Tung (pain of the crab's eye) prolapse of iris. Prolapse is black and about size of small pearl, located in pupillary region and bulges forward like a crab's eye. It is smallest at its base or root.

Etiology: Disease of liver and kidney.

Treatment: Puncture of prolapse with fine needle.

9. Yu Yi Fu Man (white jade screen) interstitial keratitis. The white screen (deep infiltration?) appears in the pupillary region and is named jade screen because of its similarity to the color of white jade. The screen may increase or decrease in size from time to time and is associated with redness of eyeball and lacrimation. It is so opaque as to resemble dusty glass.

Etiology: Wind filling the brain.

10. Chuan Mo Tao Chieh (inversion of eyelashes). Trichiasis and entropion. Eyelashes fall out if lung is weak and eyelids become swollen when the organ is filled with heat. If in addition there is heat produced by the liver, the eyes water and itch, and photophobia and blepharospasm are present. Frequent rubbing of eyes with hands cause both upper and lower lids to become swollen. This results in skin of lids becoming loose with inversion of eyelashes so that they rub the eyeball, thereby producing a "screen" in the pupillary region.



Fig. 5. Knife and hook for pterygium operation.

Etiology: Hot wind from spleen and lungs which is related to skin and hair of the body.

Treatment: Cauterization of skin of lids four or five times as it is held up by bamboo forceps.

11. Hsiao Er Chiao Mu (bird's eye of children) night blindness. Loss of vision from night until morning. Both adults and children may be affected.

Etiology: Weakness of liver and disharmony of masculine and feminine elements.

Treatment: Ingestion of powdered liver of bats, pigs, or sheep. Local treatment unnecessary.

12. Feng Hsuan Chih Yen (red eye and lids). Ulcerative blepharitis, blennorrhea of newborn? Lid margins red and ulcerated. There is photophobia. Condition may be divided into two groups:

a. Je Lan. Ulceration of lids occurring in spring and autumn appearing only in adults.

Etiology: Antagonisms of wetness and heat in body as a result of weakness of spleen.

b. Len Lan. Ulceration of lids occurring in autumn and winter confined only to infants.

Etiology: Heat from mother during pregnancy or contamination at birth by leukorrheal discharge which was not washed out of eyes.

*Medicinal Treatment:* Since disease in man is the result of disturbance in the equilibrium of Yang and Yin, the key to treatment lies in production or depletion of the two vital forces in the body through the action of suitable remedies. A trial of nearly every imaginable substance in the animal, vegetable, and mineral kingdoms has been made in the hope of discovering these remedies. Experimentations were carried out on man. A great mass of the remedies are useless. However, many have been valuable and have passed through centuries of use for the same diseases and in somewhat the same manner as they have been and are used today in Western medicine. Since eye diseases are thought to be due to diseases of internal organs, medication is often directed toward the organ thought to be involved.

In addition to medications administered orally, local therapy is employed in the form of powder for insufflation and solutions for instillation and irrigation. Besides these the applications of hot compresses, plasters, and moxa to the temples and various parts of the body may be done depending upon what ocular structure is involved and, therefore, what associated internal organs are at fault. Several popular eye drugs for local application have been recently analyzed.<sup>2</sup> Some ten eye drugs were studied chemically and all were found to contain insoluble zinc carbonate and calcium carbonate. Some contained calcium oxide and camphor. Berberine which is used in some Western eye medicines was found in one.

*Surgery:* Ophthalmic surgery in China has never been extensive since eye diseases were considered to be the result of diseases of internal organs and emphasis was on internal medications. However, several surgical procedures have been used, the most common being acupuncture, excision of pterygia, needling, or couching of cataracts, and correction of entropion.

1. Acupuncture. This operation is considered to be a strictly Chinese procedure. It consists of the introduction of hot or cold metal needles into the body as a remedial agent. These needles may be silver, gold, brass, copper, or iron, and can be either fine, coarse, short, or long (3 to 24 centimeters). The rationale of acupuncture is based on the idea that every malady is a visceral disorder. The health of the body is maintained

through the harmonious action of the five organs and six viscera.\*

According to the Chinese conception of anatomy and physiology, these structures are related in the following manner: The lung is related to the large intestine which responds to stimulation of the skin. The heart is related to the small intestine which responds to stimulation of the arteries. Similarly, the connections are postulated between

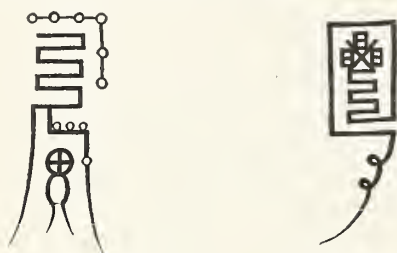


Fig. 6. Charms used in cataract operation.

liver, gallbladder and ligaments; spleen, stomach and muscles; kidney, bladder, and bones and hairs. Therefore, when the needle punctures the skin the lungs are affected, and if the muscles are punctured the spleen will be stimulated, and so forth.

Furthermore, according to the theories of Wu Lun and Pa Kuo, the organs and viscera are connected to specific structures of the eyeball and its adnexa. Any disease of an ocular structure is explained on the basis of a dysfunction of its related internal organ. In order to cure an ocular disease, the proper function of the affected organ must be restored indirectly through stimulating its "metameric" connection, such as skin, ligaments or bone, by needling.

The procedure must be performed very precisely in order to obtain results. The present-day native ophthalmologists use a book of reference, a very comprehensive work on needling, the Chen Chih Ta Ch'eng (Complete Work on Needling), by Chin Hsien, a noted physician of the Ching dynasty. In it is described the treatment of many eye diseases by needling the hands, arms, feet, various parts of the back, and almost every spot over the region around the eyes. Several places may be needled for the same disease and the needle may penetrate as deep as 3 to 9 millimeters.

2. Removal of pterygium. For small pterygia local application of a caustic such as alum stick is advocated. If that procedure fails to halt the progress of the growth over the cornea or if the pterygium is a large one, the hook and knife are called for (Fig. 5). The pterygium is first prepared for operation by topical application of a

solution of alum sulfate which causes the growth to become edematous. It is then transfixed by a needle passed through it and lifted. The operator proceeds to cut it off with a knife or scissors beginning near the middle and advancing toward the cornea and then toward the canthal region. The surgeon must take special care not to injure the caruncle, since this structure is thought to be connected to the heart and injury to it may result in serious loss of blood or formation of a fistula. Bleeding during operation may be stopped by pieces of soft lint dipped in water. A date of good luck is always chosen for such operations. The wound heals after three to seven days of rest during which time the following foods are not to be taken: fish, fried noodles, chicken, goose, donkey, horse and dog meat, pork, onions, garlic, etc.

3. Operation for cataract. Preoperative preparations: The operation must be performed in the middle of the month preceded by prayers to Buddha. The needle used in the operation is wrapped with a charm (Fig. 6). Before the operation the surgeon should burn incense and write another charm (Fig. 7) to transfer the sun's light to the patient's eye for restoration of eyesight. He also recites an incantation seven times to strengthen himself mentally. Two or three days prior to operation, measures are taken to quiet the patient and to keep his bowels open. For those who are too vigorous, a powder to tone down the constitution is given.

Instrument: A gold or gold amalgam needle is used, that metal being usually employed since the value of the instrument is supposed to guarantee the success of the operation. It is about 10 centimeters in length with the thickness of a bow string, two-thirds of it being fitted into a handle made of either hardwood or bone (Fig. 8). The point is lancet shape and, when not in use, is protected in a goose quill and laid in a square box.

Operative procedure: Immediately before operation, the eye and surrounding region is thoroughly irrigated with freshly drawn well water and cleansed of fatty substance.

The patient is then required to sit on a stool facing a window. An assistant steadies the patient's head. The unoperated eye is covered. The operator then exposes the eye to be operated on by separating the upper and lower lids with his thumb and index finger and the patient is directed to look at the tip of his nose. With the needle held firmly but gently between the thumb, index and middle fingers of his free hand, the surgeon introduces the needle into the globe through the bulbar conjunctiva at about 1½ millimeters from the limbus. The needle is inserted into the anterior chamber until it reaches the pupil. The lens

\*The five organs are the liver, heart spleen, lung, and kidney; the six viscera are the gallbladder, stomach, large and small intestines, and the bladder.



is needled three to five times and is either completely couched into the vitreous or partially dislocated from the pupillary space, after which the needle is withdrawn. The patient is supposed to be able to count fingers and to distinguish different kinds of colors after the operation. Sometimes the opacity persists for one or two months after the operation and may necessitate the repetition of the above procedure. Certain tonics may be given to hasten absorption of the needled lens.

**Postoperative care:** After the operation, the eye is immediately covered by five to seven layers of soft paper over which some black beads wrapped in soft cloth are laid in order to keep the lids closed and immobilized. The patient is gently placed in bed and instructed to lie quietly on his back. He is cautioned against talking and his thoughts should be peaceful ones. Liquid diet is prescribed. Dressings are removed on the sev-



Fig. 7. Knife for needling or couching of cataract.

enth postoperative day and full diet may then be taken. Care must be exercised in defecation and urination. Patient should guard against catching cold. During the first month of convalescence, the face may not be washed and for the first three months carrying things on shoulders and expressions of anger are forbidden. During the entire convalescent period, sour, acrid, bitter, sweet, and salty foods and wine are not to be taken. Failure to carry out the above directions may result in failure of the operation.

The beginner usually practices on sheep's eyes before he attempts to operate on the human eye.

4. Operation for entropion, trichiasis. The condition is claimed to be due to loosening of the skin of the eyelids and is treated by "clamping of the lids".

A small stick of bamboo about 3 centimeters by 3 millimeters is tied with threads at one end and the other end split until a pair of forceps is fashioned. The arms of the forceps are held apart and sufficient skin from the upper lid is drawn between the blades until the deformity is corrected. The forceps is then closed and the free end tied tightly for a period of seven days after which the redundant skin necroses and drops off and the lid correction is maintained by scar tissue.

**Chinese Spectacles:** The credit for antiquity in the use of spectacles has commonly been placed in China. According to the records of Marco Polo's travels in China, 1260 A.D., the Chinese were re-

ported to be the earliest users of spectacle lenses. However, this has had little support from various Chinese writings and it is more probable that spectacles may have been introduced into China from the West rather than developed there.<sup>3, 4, 5</sup>

Spectacle lenses in China were made from such transparent substances as Yun Mu (mica), Shui Chiang (rock crystal), Liu Li (lapis lazuli), and Po Li (glass). According to Chinese literature, spectacles or at least magnifying glass must have come into use between the Chou, Chin and Han dynasties, 1766-140 B.C. However, the use of glasses as ophthalmic appliances cannot be definitely traced further back than the Sung dynasty, 960-1090 A.D., when it was mentioned as being used by presbyopes. Spectacles became more popular during the Yuan and Ming dynasties, 1279-1368 A.D., and in the Ching dynasty glasses were worn for correction of refractive error, for protection against glare of sun, and for cosmetic purposes. Scions of wealthy families frequently donned spectacles, not because they required a correction for a refractive error but rather to acquire an appearance of wisdom and dignity beyond their actual years and experience.

The knowledge of the native optician, like his colleague in various branches of medicine, was acquired through the handing down of secret methods from father to son through many generations protected by the Guild System. Knowledge was empiric with little scientific foundation. The optician had his office in little frontless shops, on the walls of which hung hundreds of spectacles, ready made in pairs of the same strength with tabs giving notations. When nothing in pairs would suit the patient, the optician fell back on a trial-battery of twelve lenses imbedded in two strips of lacquered wood. By covering one eye and using some street sign as a test object the battery was moved up and down until the correct strength was found. The batteries of lenses consisted only of minus spheres, astigmatism being unknown. The lens were notated not by any dioptric or focal system but by animal names as they appeared in the first twelve semi-mystical signs of the Chinese Zodiac. They were found to approximate very closely the following dioptric scale.<sup>6</sup>

Notation	Diopters
Tze (Rat) .....	—20.00
Chou (Ox) .....	—16.00
Ying (Tiger) .....	—14.00
Mao (Rabbit) .....	—10.00
Shen (Dragon) .....	— 8.00
Sze (Snake) .....	— 6.00
Wu (Horse) .....	— 4.00

Wei (Sheep) .....	— 3.00
Shen (Monkey) .....	— 2.00
Yu (Cock) .....	— 1.50
Hsu (Dog) .....	— 1.00
Hai (Pig) .....	— 0.50

Each lens had its name engraved in the lacquer beside it and spectacle wearers wishing to order a new pair simply asked for "snake" spectacle, or "monkeys". Plus lenses were used only for presbyopes. Rarely were they prescribed for young men and women even if their error called for a hyperopic correction. This was because the young did not dare to pose as being so erudite as to use the type of lens required by his elders. The presbyopic lenses were labelled "Lao Kwang" or "Old men's" lens and were four in number. They started with "Forty Years" spectacles, the other three being "Fifty," "Sixty," and "Seventy" Year glasses. The test for presbyopes at the reading distance was the lines of the finger print.

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where major tropical disease problems have been encountered. Many of the men have acquired infections which will manifest themselves in relapse or in chronic form after returning to this country. In many, the initial symptoms may appear after return to civilian life. The subject is therefore of practical interest and importance to the civilian physician who should be "tropical medicine conscious" in the care of all persons who have resided or traveled in the tropics, and be familiar with the problems he may encounter.

There is considerable discussion concerning the potential dangers to the health of the civilian population in the spread of these diseases, as well as in the possible introduction of new and more pathogenic strains of organisms. Naturally, the infections which are acute and have a short period of incubation and communicability are much less likely to be brought back to the States than the chronic diseases and those with a long incubation period. Unrecognized asymptomatic carriers may be the source of new strains of organisms. Many infections require an intermediate host for their spread which would be checked by the absence of the necessary vector here. It is the consensus that tropical diseases, as hazards to the civilian population, possibly have been overemphasized. With improved standards of living, education of the public, and the application of modern public health practices, there have been no outbreaks in the civilian population in spite of the fact that thousands of our servicemen who have contracted tropical diseases have returned in the past year or two.

Only those tropical diseases which have most commonly affected our military personnel will be discussed. *Malaria*, the most prevalent of the group, has already received most deserved attention, and since this subject has been completely covered in a recent issue of this JOURNAL,<sup>7</sup> it will not be reviewed here.

Of the tropical diseases, *Filariasis* has probably excited the most interest by occurring in epidemic form for the first time in American military history. This disease is of importance to the civilian physician because its initial manifestations or recurrent attacks may not appear until some time after the infected serviceman has returned to civilian life. Most of the infected military personnel have been stationed in the Central and South Pacific areas, primarily in the Samoan group of islands. There are probably no tropical areas greater feared by the serviceman. The presence about him of natives with evidence of chronic repeated infection, such as grotesque deformities of the extremities and genitalia, causes

## TROPICAL DISEASES IN RETURNING MILITARY PERSONNEL

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With the cessation of hostilities and the return to civilian life of millions of our military personnel, who for varying periods of time have been exposed to diseases in tropical and semitropical areas, civilian physicians will be confronted with problems in "tropical medicine" with increasing frequency. In the global conflict greater numbers of our troops than ever in the past inhabited some of the most disease-infested areas in the world, principally in the Pacific and Far East,



him grave concern regarding his future well-being. Likewise, in this country, with the return of considerable numbers of infected men, apprehension has been noted relative to the possibility of the disease becoming endemic. However, it is now generally agreed that there is no cause for concern. None who has returned to the States with filariasis has developed elephantiasis,<sup>1, 14</sup> and the likelihood of anyone doing so is very remote. This will be better appreciated if the life history of the worm is reviewed.

By far the most prevalent of the filarial worms is *Wuchereria bancrofti*. It is transmitted to the human by the bite of an infected mosquito which liberates sexually immature microfilariae under the skin. These migrate by way of lymph channels to the lymph glands where they mature into adult forms. There is only one adult worm for each larva which the infected person receives from the mosquito. The clinical picture of the disease is the result of the reaction to these mature forms in and about the lymphatic system. Here the adult forms fertilize, and as a result the gravid females expel microfilariae which make their way into the blood stream. These young forms are not pathogenic and are not infective to man until they have passed through a stage of development in the mosquito. Because an individual infected with filariasis will never have more adult worms than the number of microfilariae he has received from infected mosquitoes, the adult worms not multiplying in the body, the severity of an individual's infection depends upon the number of times he has been bitten by infected mosquitoes. One must be repeatedly infected over a period of many years before he will develop elephantiasis.

The incubation period and clinical manifestations of filariasis are variable. A period of six weeks to eighteen months may elapse from the time of infection before the first appearance of symptoms.<sup>5</sup> Some never develop clinical symptoms although heavily infected. Among the earliest symptoms are feelings of weakness and numbness in an extremity.<sup>9</sup> The extremity aches, especially after heavy work, and shortly this changes into periodically recurring pains which are not severe. Local swellings and acute lymphangitis develop in varying degrees at irregular intervals, lasting no more than several days at a time. The latter usually appears first in the axilla, elbow, or groin and spreads peripherally. This is an important distinguishing feature from the bacterial type of lymphangitis which is not retrograde. The area of involvement varies from a few centimeters to the length of the extremity. The localized areas of swelling are red and tense. Involvement of the

scrotum or its contents is present in most cases. Fatigue, headache, vertigo, and nausea are common accompaniments of the attacks. Fever and prostration are present in those with more severe episodes. The flare-ups gradually decrease in severity after the patient ceases to be inoculated by infected mosquitoes. Adenopathy usually develops, especially in the axillary, inguinal, and femoral regions. The lymph nodes are multiple, tender, discrete, and firm, tending to form chains which vary in size from that of a pea to a walnut. They are not attached to the skin and do not suppurate. Elephantiasis, which arises only following many years' residence in an endemic area with repeated infection, rarely appears even in natives before the age of twenty, and usually does not involve more than 5 per cent of the population.

Laboratory studies are of little aid in the making of a diagnosis. The proof of the presence of this disease is the demonstration of microfilariae in the blood or the adult worm in a biopsied specimen. In spite of repeated examination, day and night, the larvae have been found in only a few soldiers<sup>14</sup> and in none of the several hundred infected marines studied at the Marine Barracks at Klamath Falls, Oregon.<sup>1</sup> Adult worms have been demonstrated in about 30 per cent of the Pacific cases in whom lymph node biopsy was performed. This procedure should not be performed in the presence of any activity. Not all agree that biopsies are justified at all. Leukocytosis and eosinophilia may be present but are not diagnostic. Skin tests may be performed on suspected individuals using an extract derived from *Dirofilaria immitis*, a related species of filarial worm which infects dogs. These are not specific however.<sup>2, 3</sup> It is felt by some that a titer of 1:4,000 or higher is diagnostic.<sup>13</sup> When degeneration and calcification of adult worms have occurred, roentgenograms may be of diagnostic aid.

There is no effective therapy for filariasis. Treatment consists primarily of supportive measures. The possibility of recurrent episodes is to be anticipated but the fact that there is only a negligible chance of these producing permanent damage such as elephantiasis should be emphasized. The fear of impotence and sterility may be dispelled by the fact that of the wives of a large group of marines with filariasis, who had returned to the States, 18 per cent were pregnant or had given birth at the time of survey.<sup>19</sup>

It is generally agreed that it is extremely unlikely that filariasis will gain a foothold in this country since there are so few microfilariae in the blood of infected individuals—too few to act as a reservoir for the infection of mosquitoes. Further-

more, this disease has in the past been endemic in South Carolina but has since died out.

*Bacillary dysentery* has been one of the most incapacitating diseases among our troops both in this country and abroad. Fortunately, most of the infections have been mild. Generally, infections with the Flexner bacillus are mild, those with Shiga severe, and those with the Sonne organism intermediate in severity. Encounters with the Shiga strain have not been numerous. Results have been very good in those recognized and treated early. Cases which are erroneously diagnosed as "simple diarrhea" and those which are neglected and allowed to become chronic are the most difficult to treat and most serious in their potentialities. Approximately 5 per cent of the acute cases progress into chronic dysentery; in those convalescing from the disease, the carrier state persists for four to six months frequently and for several years in some.<sup>6</sup>

A reliable diagnosis cannot be made clinically in all cases of bacillary dysentery because of the variability in onset and severity of the disease. Sigmoidoscopy reveals changes varying from diffuse hyperemia and edema of the mucous membrane to extensive ulceration with inflammatory exudate, depending upon the stage of the disease. A fresh stool specimen is usually abundant in polymorphonuclear leukocytes and large macrophages. Fecal specimens obtained by rectal swabs should be inoculated on selective differential media which permit growth of the pathogens. In a chronic infection the culture may be negative at intervals. Agglutination and fermentation tests serve to differentiate the specific organisms. Agglutination tests with the serum are on the whole unreliable.<sup>12</sup>

Therapy consists primarily of hydration and chemotherapy with one of the sulfonamides. Sulfadiazine is preferred by the Army Medical Department to the poorly absorbed sulfa drugs.<sup>15</sup> It decreases the danger of developing chronicity and the carrier state. Likewise the chances of spread are decreased. Penicillin is not effective.<sup>15</sup> Treatment should not be delayed until the results of the stool culture are known. Regardless of the mildness of the infection, proper isolation technic is essential. Mild cases are as infectious as those which progress. The "convalescent carriers" are commonly the source of spread and should be periodically checked until stool cultures are repeatedly negative. Probably new pathogenic strains are being imported, but with the protection of the food and water supply and the application of modern sanitary measures, there is little danger of epidemics developing.

*Amebiasis* is not strictly a tropical disease. The American physician is generally on the lookout for this disease in the presence of diarrhea because of its prevalence. It is estimated that the causative organism, *Endamoeba histolytica*, a protozoan parasite, is harbored in the intestinal tracts of 3 to 10 per cent of the population of the United States. Many returning servicemen are harboring these organisms, possibly of a more pathogenic strain, and if they maintain the characteristics of the infection they will have periods of exacerbations and remissions after return to civilian life. Many, however, will never have symptoms.

Amebic dysentery is more insidious in its onset and is generally more protracted in its course than bacillary dysentery; however the disease varies greatly in character and severity. Symptoms may develop from one week to several months after infection. In mild cases diarrhea, without gross evidence of blood, pus or mucus, associated with vague digestive symptoms, abdominal discomfort and tenderness, may be present. These cases may, however, become severe or may have a sudden onset with dysentery, abdominal pain and tenderness. These attacks may last a few days or persist with or without remissions for months. There is a definite tendency to chronicity and to resist treatment. Carriers commonly complain only of vague constitutional symptoms. In the presence of right upper quadrant discomfort, irregular fever, sweats and chills, especially with a history of dysentery, the possibility of hepatitis and hepatic abscess must not be overlooked.

The stools in amebic dysentery are generally less frequent, much less purulent, and contain more feces than those of bacillary dysentery. The diagnosis can be made with certainty only by identification of the causative organism which may be present in the stool in either an ameboid (vegetative) or encysted form. Motile amebae are found in acute cases whereas cysts are passed primarily by chronic cases and carriers and are found usually in patients with semi-formed or formed stools. Since amebae are easily killed, it is essential to examine warm, freshly obtained stool specimens in order to discover them. They are more abundant in the blood stained flecks or mucus. Purged specimens, samples following saline enemas, or material obtained directly from the lesions should be examined if no organisms are found in normally passed stools. With repeated examinations an accurate diagnosis will be made in most instances. In searching for cysts the concentration method by zinc sulphate flotation yields positive results most often. Cysts are the only form capable of naturally transmitting the infection and



may remain viable outside of the body for many weeks; the ameboid forms when ingested are readily destroyed by gastric juice. Therefore infected individuals who at the time do not have dysenteric stools, and are passing cysts, are the principal sources of infection.

Sigmoidoscopic examination in about 20 per cent of the cases of amebic dysentery reveals necrotic patches with slightly reddened edges. Since the submucosa is more involved than the mucosa, edges of the ulcers are frequently undermined. In contrast to bacillary dysentery the mucous membrane in between the ulcers is not appreciably affected and there is usually little exudate present unless secondary infection has taken place.

In the therapy of amebiasis, in addition to emetine, the administration of carbasone and either diodoquin or chiniofon is considered essential. The recommended course of therapy is completely presented in a recent War Department Medical Bulletin.<sup>16</sup> Results in acute infection are generally excellent but chronic infections including metastatic lesions may be refractory to therapy. Regardless of the mildness of the clinical symptoms it is not considered proper to neglect a detected infection. To do so may result in the development of a complication such as liver abscess, to chronic invalidism, and under insanitary conditions to the dissemination of the infection to others.

*Worm infestations* are common in returning troops but they do not usually produce symptoms. This group includes hookworm disease, tapeworm infection, ascariasis, strongyloidiasis, and whipworm infection, which have already been present in the United States. Examination of the stool should be performed in those with diarrhea, "enteritis," "colitis," blood in the stool, or unexplained anemia. Many of the helminth eggs can be identified by the microscopic examination of a fleck of fresh stool in saline on a clean covered slide. Staining of the sample will verify the diagnosis and often discover protozoa which may have been overlooked. Concentration methods are generally superior.<sup>10</sup> These infestations are not serious but deserve attention.

*Dengue*, a mosquito-borne infection caused by a filtrable virus, has temporarily incapacitated large numbers of our troops. Although this disease has been endemic in our own southern states for some time, it has reached fairly serious epidemic proportions in certain South Pacific islands.<sup>8</sup> Dengue does not offer much of a problem in regard to its spread here since this infection is an acute, self-limited one of rather brief duration and is trans-

mitted in the acute stage; the patient will have recovered prior to his return home.

*Scrub typhus* (tsutsugamushi disease), a typhus-like infection caused by mite-borne rickettsias, has been common in certain Asiatic-Pacific areas and has been responsible for considerable temporary disability. The disease, however, is an acute one, occasionally requiring a long convalescent period for recovery, and almost always terminates by complete recovery. There is no danger of spread in this country since the mite vector is absent here.

*Sandfly* (Phlebotomus) fever is another acute, self-limited, febrile virus infection. This disease, which presents the clinical picture of influenza, has disabled large numbers of our troops in North Africa and the Middle East for short periods of time. The mortality rate is low. Since the infection is transmitted by the Phlebotomus fly, which is not found here, there is no danger of spread in the United States.

*Epidemic typhus, yellow fever, cholera and plague* have not been encountered to any great extent in our military personnel because of prophylactic vaccination of troops going to endemic areas, quarantine precautions, and other control measures. The effectiveness of typhus vaccine was especially shown in North Africa and Italy where there were few or no cases in spite of an epidemic in the unvaccinated civilians.<sup>11</sup> Plague is already endemic in rodents in many of our western states and is occasionally transmitted to man by the fleas of these rodents. Since the course of these diseases is comparatively short, they will rarely, if at all, be imported by returning service personnel.

*Schistosomiasis* is an infection due to a flat worm, acquired in tropical and semitropical areas by the entrance through the skin, usually while in wading or swimming, of larval forms of worms. These young forms migrate primarily to the abdominal blood vessels and mature, depositing eggs mostly into the intestine and bladder. The eggs are also carried to other abdominal organs, particularly to the liver. As a result, symptoms vary with the stage of development and regions of involvement. This infection is unusual among returning servicemen because of preventive measures employed. The diagnosis can be made by the finding of the characteristic ova in the feces or urine. Compounds of trivalent antimony are the most effective drugs in therapy.<sup>17</sup> There is a remote possibility of the establishment of this infection in this country. Certain snails in the lakes of our neighboring states are hosts for

animal schistosomes but can produce no more than dermatitis in individuals swimming or wading there.

*Paragonimiasis*, an infection by a lung fluke, resulting from eating improperly cooked or raw crabs or cray fish, has been reported in some returning war veterans from the Asiatic-Pacific area.<sup>4</sup> In infected individuals larval forms of the worms migrate to the lungs especially, resulting in the production of granulomatous or suppurative lesions in the small bronchi. They may also wander to other parts of the body, first producing symptoms months after infection. The possibility of this disease should be considered in discharged servicemen with chronic cough, chest pain, or hemoptysis. The finding of the characteristic ova in the sputum or feces makes the diagnosis. Treatment consists of tartar emetic and emetine. The progress varies with the severity of the infection.

The diagnosis of *Leishmaniasis* should be entertained in an exposed individual who develops the symptom complex of fever, spiking daily—often more than once a day—splenomegaly, anemia, and leukopenia. This is an infection with a protozoan organism, *Leishmania*, and is transmitted by sandflies. When widespread lesions are produced, the disease is known as kala-azar. It is endemic in India, North China, and in the Mediterranean area, a number of cases having occurred in our armed forces. Since the incubation period may be as long as fifteen months, symptoms may not develop until after return to civilian life. An early diagnosis is confirmed by the finding of *Leishman-Donovan* bodies in puncture material from the organs which become most heavily infected. Splenic puncture is most reliable if carefully and properly performed. Lymph node and sternal puncture are likely to show the parasites and are easier and safer. A strongly positive aldehyde test is suspicious. Neostibosan is at present considered to be the drug of choice in therapy.<sup>18</sup> The mortality rate is high in untreated individuals. Since the vector is not present here, the disease cannot become endemic in this country.

*Trypanosomiasis* (African sleeping sickness) is a specific protozoan disease which has infected only very few of our troops. However, the possibility of this infection should be kept in mind in patients who have traveled in tropical Africa. Fever, generalized lymphadenopathy, and later evidence of central nervous system involvement such as headache, periods of dullness, apathy, twitchings and delirium are characteristic. There is no danger of transmission in the United States since the vector, the tsetse fly, is absent here.

# SUMMARY

Tropical medicine has become a subject of practical interest with the return of millions of men who have lived in tropical areas for varying periods of time.

The civilian physician may be called upon to care for discharged servicemen who have contracted diseases in the tropics, whose initial symptoms may not appear until after return to civilian life, and also for those who are recurrent patients and carriers.

The problems of the individual physician will be the diagnosis and treatment of these diseases, and the prevention of their spread.

A knowledge of the infections, their modes of transmission, and the application of effective public health measures will prevent dissemination. Some of these tropical diseases, however, cannot be propagated in this country because of the absence of the necessary intermediate hosts, vectors, and carriers.

Although the possibility of importing tropical diseases and new strains of pathogenic organisms into this country may have caused unnecessary lay apprehension, hazards do exist and require the attention of public health authorities.

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## CLINICOPATHOLOGIC CONFERENCES

### SUDDEN DEATH DURING THE CLINICALLY CONVALESCENT STAGE OF ANTERIOR POLIOMYELITIS

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#### CASE REPORT

*Clinical History:* On October 9, 1944, the patient, a white male twenty-five years of age, developed an illness characterized by the symptoms of headache, nausea, vomiting, and chills. On October 10 he experienced urinary and rectal incontinence. At about the same time he lost the use of his left leg. He was admitted to a hospital. Shortly after admission the temperature was 101 degrees, the pulse rate was 120 per minute, and the respirations were 32 per minute. There was marked weakness of the left leg. The cerebrospinal fluid was examined and found to contain a total of 1,700 cells with 90 per cent polys. The cerebrospinal fluid sugar was 76 milligrams per cent. A few days later another examination of the cerebrospinal fluid showed a total cell count of 398 with 88 per cent lymphocytes. The patient developed complete paralysis of both lower extremities. On October 14 he was transferred to another hospital where examination showed paralysis of both legs, the left arm, and accessory muscles of respiration on the right, distention of the abdomen, and slight cyanosis. The patient was unable to void. He was placed in an oxygen tent and catheterized every twelve hours. His condition became progressively worse and on October 15 he was placed in a respirator where he remained until November 12. By December 26 his condition had improved to such an extent that he was able to be out of the respirator except occasionally during the night. By January 4, 1945, the respirator was no longer necessary. The patient was transferred to a U. S. Army poliomyelitis center.

*Physical Examination:* On admission to the poliomyelitis center the patient exhibited moderately severe respiratory difficulty, but no cyanosis. He was cheerful and cooperative. The temperature was normal, the pulse 100, and the respirations were 18 per minute. There was evidence of recent weight loss. Examination of the heart and lungs revealed nothing of note. The blood pressure was 110/76. The abdomen was flat. There was complete paralysis of both lower extremities

with absent reflexes. The abdominal muscles, intercostal muscles, diaphragmatic muscles, and the muscles of the neck and both upper extremities were extremely weak. The patient had slight sphincter control. The sensory examination was normal.

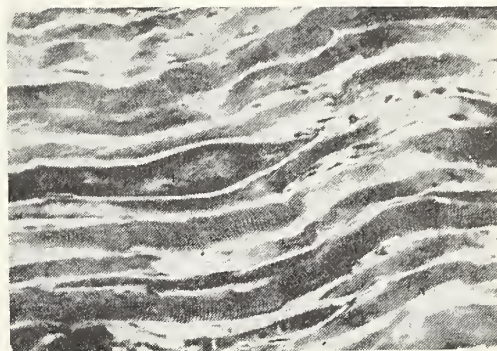


Fig. 1. Photomicrograph of right quadriceps muscle showing atrophy of denervation. Bodian stain. A.M.M. Neg. 91948 (x 500).

*Laboratory Examination:* Urinalyses were negative. On several occasions the white blood cell count was 11,100 with 61 per cent neutrophils and 35 per cent lymphocytes. The red blood cell count was 5,070,000 per cubic millimeter. The hemoglobin was 15 grams (H & H).

*Course:* Therapy consisted of the Kenny treatment with active and passive exercises as could be tolerated. Eventually the patient was able to sit up for 20 to 30 minutes at a time. The patient had difficulty in breathing in the evening. The presence of cyanosis was checked daily and none was noted. On the morning of February 26 at 7:10 o'clock, the nurse was unable to arouse the patient. Respirations were reported as difficult. Artificial respiration was administered until the mechanical respirator was brought to the bedside. A faint temporal pulse was present and a few irregular cardiac sounds could be heard. Caffeine and coramine were given. Oxygen was administered. The patient was pronounced dead at 8:15 a. m. The night nurse had seen this patient hourly during the night, the last time at 6:30 a. m. at which time the patient had no complaints.

#### *Clinical Diagnoses:*

1. Poliomyelitis, severe, with paralysis of both lower extremities and severe generalized muscular weakness.

2. Acute respiratory failure.

*Necropsy Abstract:* At autopsy no significant thoracic or abdominal visceral lesions were present. The findings of note were limited to the spinal cord and striated musculature. Throughout the length of the cord, the anterior and lateral gray columns were converted into tubes of gela-

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tinuous brownish material. The involvement was more marked on the right side than on the left. Microscopically, most of the anterior horns and large portions of the lateral horns consisted of granulation tissue which obviously was engaged in repairing the defects created during the acute stage. In many places the granulation tissue contained extravasations of erythrocytes. At one place in the thoracic cord there were two necrotic anterior horn cells imbedded in a small area of hemorrhage. Samples of the intercostals, psoas, quadriceps, diaphragm, erector spinae, and gastrocnemius muscles were examined. Histologically, all showed a most extreme degree of atrophy



Fig. 2. Photomicrograph of thoracic spinal cord showing the dissolution of the anterior and lateral horns. A.M.M. Neg. 91953 (x 15).

of denervation. The great majority of the muscle fibers were reduced in width; the cross striations were either lacking or dimmed; the sarcoplasm was frequently separated from the sarcolemma; and there was an apparent increase in the sub-sarcolemmic nuclei. In addition to the atrophy of denervation there were areas of degeneration with a conversion of the muscle tissue into homogeneous hyaline-like material. A slight inflammatory reaction and some replacement adiposity were noted. Throughout all the involved muscles, scattered normal fibers were seen.

#### *Anatomic Diagnoses:*

1. Poliomyelitis.
2. Atrophy of denervation and degeneration, striated muscle.

#### SUMMARY AND COMMENT

This case affords the unusual opportunity to study the morphologic alterations occurring during the clinically convalescent stage of severe poliomyelitis. In summary, the patient developed a typical poliomyelitis in October, 1944. The severity of the poliomyelitis was such as to necessitate the continuous use of a Drinker respirator until November 12, 1944. From then until January 4, 1945, the respirator was used intermittently.

The patient was admitted to a poliomyelitis center on January 25, 1945. On admission the examination revealed evidence of weight loss, labored respirations, complete paralysis of both lower extremities, and marked weakness of the intercostal, abdominal, cervical, and upper extremity muscles. The patient was treated by the Kenny pack method. In the middle of February he was able to sit alone for twenty to thirty minutes. During the entire period of hospitalization the respiratory difficulty was always more marked in the evening than in the daytime; at no time, however, did cyanosis develop. On February 26, 1945, at 7:10 a. m., the patient could not be aroused. Artificial respiration followed by the use of the Drinker respirator, and the administration of respiratory stimulants were of no avail. The cardiac beat ceased at 8:15 a. m.

At autopsy the anterior and lateral gray columns of the spinal cord contained numerous areas of granulation tissue.

In the absence of visceral lesions such as an aspiration pneumonia or a myocarditis, the exact mechanism of death occurring during the clinically convalescent stage of poliomyelitis has never been adequately explained, nor have the clinicopathologic features of a sufficient number of cases been correlated. In this case it would seem that death resulted from an interference in the function of some of the residual anterior horn cells. This could have occurred either by compression from edema and hemorrhage, or possibly from an interruption of a sufficient number of telodendritic-

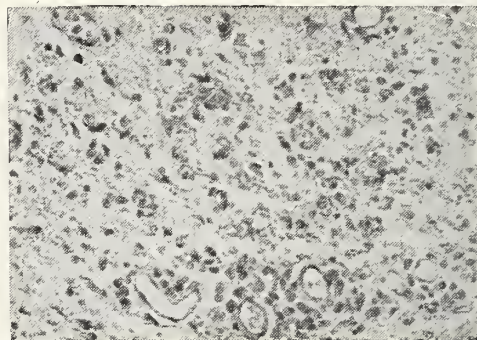


Fig. 3. Photomicrograph of the thoracic spinal cord showing the replacement of the anterior horn by granulation tissue. A.M.M. Neg. 90760 (x 600).

dendritic junctions due to an invasion of the synaptic territories by the proliferating granulation tissue. It is conceivable that the aforementioned changes may occur commonly in the repair of the devastation following the onslaught on the poliomyelitis virus. In the less severe case (in contrast to this case where life was maintained for four and a half months with a negligible margin



of safety) the loss of a few more anterior cells or interruption of occasional telodendritic-dendritic junctions would be clinically undetectable and physiologically insignificant.

## SUBACUTE BACTERIAL ENDOCARDITIS TREATED WITH PENICILLIN

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### CASE REPORT

The patient, a bombardier twenty-seven years of age, was admitted to the hospital on February 23, 1945, with a history of the insidious onset of malaise, anorexia, fever, and petechial hemorrhages on the hands, feet, and finger tips since the first week of January, 1945. There was no indication of when he may have had rheumatic fever, although in 1940 he was told by a physician that he had an "insignificant heart murmur." He had had no recent upper respiratory infections or dental treatment.

The temperature upon admission was 102.2 degrees, pulse 96, and respirations 20. Physical examination revealed scattered petechial hemorrhages over the palms, finger tips, trunk and soles, and extensive bilateral retinal hemorrhages. Examination of the heart revealed a systolic murmur at the apex and a diastolic murmur at the base, heard best at the left border of the sternum in the third intercostal space. The blood pressure was 100/70. There was moderate clubbing of the fingers.

Laboratory studies showed 80 per cent hemoglobin, 4,450,000 red blood cells, and 13,500 white blood cells with a differential count of 84 per cent neutrophils, 14 per cent lymphocytes and 2 per cent monocytes. Urinalysis was negative. The erythrocyte sedimentation rate was 48 millimeters in one hour. Blood cultures on February 24, 25, and 26 were positive for *Streptococcus viridans*. Penicillin sensitivity of the organism, determined by the method of Cooke,<sup>1</sup> was between 0.05 and 0.07 Oxford units.

Treatment with penicillin was begun on February 27. The dosage was 40,000 Oxford units given intramuscularly every three hours. On the eleventh day of treatment the dosage was changed to 40,000 units every two hours, corresponding to the report of McAdam and his associates<sup>2</sup> on serum bacteriostatic levels of penicillin. A total of 8,400,000 units was given over a period of twenty-one days. The initial response was not dramatic and for the first eight days of treatment the temperature fluctuated from 98.6 to 102.0 degrees. Thereafter the temperature remained nor-

mal and the sedimentation rate receded to 10 millimeters in one hour. The blood culture was positive on the second day of treatment but all subsequent cultures were sterile. The clinical improvement was remarkable. No new petechial hemorrhages appeared, the retinal hemorrhages were promptly absorbed, and he gained twenty pounds. There was no change in the clubbing of the fingers or in the cardiac murmurs.

Dental consultation on March 29 revealed large periapical abscesses of the right and left upper central incisors. As a precautionary measure, prior to extraction of these teeth, penicillin was administered in a dosage of 40,000 units given intramuscularly every two hours from April 4 to 11. A total of 3,400,000 units of penicillin was given during this period. This dose was no doubt much greater than necessary. On April 8 the diseased teeth were removed. There was no febrile reaction and the blood culture remained sterile. An organism culturally similar to that isolated from the blood was recovered from the abscess. Subsequent study proved that the organism from both sources was *Streptococcus viridans*, subgroup *salivarius*.

The patient continued well until June 27 when there appeared sudden, severe pain in the epigastrium accompanied by nausea and vomiting. There was no hematemesis or melena. Physical examination revealed only generalized abdominal tenderness. There was no evidence of shock. Morphine was required for relief of the pain. All symptoms disappeared in four days. The temperature was elevated to 100.2 degrees on June 28 and 29, and the white blood count was 19,100. The blood culture remained sterile and the erythrocyte sedimentation rate did not increase above normal. X-ray examinations of the chest and the gastro-intestinal and genito-urinary systems were negative. An embolic accident was suspected but never proved. Observation during the following month revealed no clinical or laboratory evidence of activity of the disease. Nevertheless it was considered wise to administer a second course of penicillin. Treatment was begun on August 6. The dosage was 40,000 units given intramuscularly every two hours. During the following 21 days 8,500,000 units were given.

The patient was observed for nine months following the initial course of penicillin. Throughout this period he was clinically well except for a brief episode of acute abdominal pain, the nature of which was not established. Following the second course of penicillin there was moderate regression of the clubbed fingers. The blood culture and erythrocyte sedimentation rate were checked

From AAF Regional Hospital, Pyote Army Air Field, Texas.

once or twice weekly and both were consistently negative.

#### SUMMARY

A case of subacute bacterial endocarditis in which the infection was apparently terminated by penicillin is reported. Two courses of penicillin, 8,400,000 and 8,500,000 units respectively, were administered. For a short period before and after the eradication of a dental focus of infection, an additional 3,400,000 units were given. A total of 20,300,000 Oxford units was thereby administered. All of the penicillin was administered by the intramuscular route and most of it in doses of 40,000 units every two hours. The causative organism was *Streptococcus viridans*, subgroup *salivarius*, and it was identified in both the blood stream and a dental focus of infection.

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1. Cooke, Jean V.: Simple clinical method for assay of penicillin in body fluids and for testing of penicillin sensitivity of bacteria. *J. A. M. A.*, cxxvii:445-449 (February 24) 1945.
2. McAdam, I. W. J., Duguid, J. P., and Challinor, S. W.: Systemic administration of penicillin. *Lancet*, ii:336-338 (September 9) 1944.

#### OPHTHALMIC PRECEPTORSHIPS

In regard to the substitution of a preceptorship for residency in an ophthalmic hospital, the American Board of Ophthalmology has always accepted such training in favorable cases. During the present overcrowding of facilities, the Board expects to take a liberal attitude regarding the requirements for training.

It should, however, be pointed out that neither a residency nor a preceptorship suffices in itself to meet the requirements of the Board. Each case will still be judged on its merits in determining fitness for examination.

In entering upon preceptorship certain conditions should be kept in mind. First the student will profit most after a sound course in the basic sciences of physiology of the eye and of vision, optics, pathology, bacteriology, chemistry, pharmacology, the relation of the eye to general disease, anatomy, embryology and neurology.

This is essential for a residency, more so for a preceptorship. While men have been accepted from preceptors not diplomates of the Board, it is obvious that the Board has more information about those teachers who have passed its examinations.

Any preceptor should understand that he is assuming a responsibility in taking a student and is not merely obtaining help in the drudgery of his office. He should be willing to give time to clinical training and the use of apparatus, slit-lamp, ophthalmoscope, tonometer, and to directing the student's practice in surgery on animal eyes, assisting in operations, and ultimately in the performance of them.

To cover the same amount of ground will take much longer in a preceptorship than in a residency and students should accept opportunities to take hospital positions of all sorts as they become available.

#### IOWA TUBERCULOSIS ASSOCIATION TO MEET IN DES MOINES MARCH 28 AND 29

The 1946 annual meeting of the Iowa Tuberculosis Association will be held in Des Moines at Hotel Fort Des Moines March 28 and 29. The Thursday, March 28, sessions for medical and professional workers will open at 9:30 a. m. with an address on Today's Major Problems in Tuberculosis Control by Miss Mary Dempsey, Statistician of the National Tuberculosis Association in New York City. This will be followed by a talk on A County Program for Tuberculosis Control by C. J. Stringer, M.D., Medical Director of the Ingham Sanatorium at Lansing, Michigan, and a discussion of Mass X-Ray Among Industrial and Community Groups by Leon H. Flancher, M.D., Medical Director of the Cooperative Case-Finding Program. The afternoon sessions will open at two o'clock with Miss Metta Bean, Director, Social Service Department of the Wisconsin Anti-Tuberculosis Association, Milwaukee, speaking on Problems of the Tuberculosis Family, after which Maxim Pollak, M.D., Medical Director and Superintendent of the Peoria Municipal Tuberculosis Sanitarium, will talk on Routine X-Rays of Hospital Admissions—An Important Field in Case-Finding.

The annual dinner of the Association will be held Thursday evening at six-thirty o'clock, with Mr. C. W. Sankey of Clarion, Wright County Superintendent of Schools, presiding as toastmaster. Addresses will be given by the Honorable Robert D. Blue, Governor of Iowa; J. C. Painter, M.D., Dubuque, President of the Iowa Tuberculosis Association; and R. D. Bernard, M.D., Clarion, President of the Iowa State Medical Society. John Barnwell, M.D., Director, Tuberculosis Service, Veterans Administration, Washington, D.C., will speak on V-Day for the Tuberculous Veteran.

A joint session will be held Friday morning at nine-thirty o'clock. Dr. Stringer will open the program with a talk on Rehabilitation as Viewed by a Sanatorium Administrator, following which Peter W. Janss of Des Moines will discuss Your County Association's Part in the Program for Removal of Obstacles to the Treatment of Patients in Sanatoria, and Miss Dempsey will speak on A Forecast of the Future. At the noon luncheon C. L. Putnam, M.D., Director of Local Health Services of the Iowa State Department of Health, will speak on Local Health Departments for Iowa.

#### HOBBY SHOW

##### Notice to Doctors Returned from Service

If you have a hobby to enter in this show at the annual meeting, won't you please write the central office at once so that room may be reserved?



STATE DEPARTMENT OF HEALTH

*Walter L. Diering*

DIPHTHERIA CASES AND DEATHS, 1935-1945

The following table (Table I) contains data with respect to 2,928 cases of diphtheria reported to the Department for the eleven year period 1935-1945, and to 199 deaths as recorded by the Division of Vital Statistics for the same years (through October, 1945).

TABLE I		
Diphtheria Morbidity and Mortality in Iowa		
Year	Cases	Deaths
1935	599	56
1936	289	26
1937	179	11
1938	395	24
1939	305	15
1940	190	15
1941	199	8
1942	187	10
1943	156	12
1944	203	12
1945	226	(1st 10 Mos.) 10
Total	2,928	199

THE VIRULENCE TEST FOR DIPHTHERIA

Although useful in determining whether diphtheria bacilli from a patient or contact have lost or still retain their pathogenicity, a virulence test on organisms isolated in pure culture from the throat or nasal passages should not be considered until at least three weeks have passed following onset of illness or discovery of the carrier state. There are two reasons why the virulence test is impracticable before expiration of the twenty-one day period: (1) when organisms persist, they are usually virulent through the third week of the disease, and (2) in the majority of cases cultures become negative during the third week.

TREATMENT OF DIPHTHERIA CARRIERS WITH PENICILLIN

Berman and Spitz<sup>1</sup> applied penicillin locally to the nose and throat of a group of diphtheria carriers in an attempt to revert them quickly to a non-carrier status. A patient was not considered a carrier unless diphtheria organisms had been found in culture of the nasopharynx for a period of more than three weeks. In a group of diphtheria cases, 22 fell into this category. These were divided into a control and a treated group. The control group of 12 patients had had positive cultures for Cory-

nebacterium diphtheriae for four weeks. The treated group of 10 patients likewise had been positive for four or five weeks.

The penicillin was dissolved in isotonic solution of sodium chloride so that 1 cubic centimeter contained 500 Oxford units. By means of an ordinary nose dropper, 1 cubic centimeter of this solution was instilled into both nares four times each day for five days. Immediately after instillation another 1 cubic centimeter was sprayed with an atomizer onto the fauces and posterior wall of the pharynx. The total amount of penicillin used per patient throughout the five day course was 20,000 units. The control group of patients was treated with hot saline gargles four times daily.

In the 10 treated patients the throat cultures became negative within the treatment period or on the first day after cessation of therapy. Seven of the 12 patients in the untreated group reverted to negative within the fifth week. The remaining five continued to be positive for six to seven weeks, after which it was decided to treat them with penicillin. All of these cases became negative as in the treated group; that is, within the five days of therapy or on the first day thereafter.

1. Berman, B. B., and Spitz, S. H.: Treatment of diphtheria carriers with penicillin. Bull. U. S. Army Med. Dept., iv:87-91 (July) 1945.

MORBIDITY AND MORTALITY FROM MEASLES

Reports from attending physicians and local health officials indicate epidemic prevalence of measles in some of the counties of Iowa, notably those in central and north central parts of the state.

Deaths from measles in Iowa for the ten year period 1935-1944 appear in the accompanying table:

TABLE II	
Deaths from Measles in Iowa, 1935-1944	
Year	Number of Deaths
1935	146
1936	2
1937	4
1938	26
1939	29
1940	14
1941	16
1942	16
1943	18
1944	24
Total	295

Although maximum mortality was recorded in 1935 with 146 deaths, followed by two "off-years" for measles, it should be noted that the disease was unduly prevalent and attended by moderately high mortality for a continuous period of seven years (1938-1944). In 1945, four deaths were notified through October.

In order that reporting may accurately reflect true prevalence, the State Department of Health is dependent upon interest and cooperation of attending physicians, city and county health officials, district health services, public health nurses, and others who know of the occurrence of communicable disease.

REPORTING OF CASES

During a period of epidemic prevalence of diseases such as influenza, measles, and whooping cough, a single card may be used to report a number of cases as observed or brought to attention during the period of each week ending Saturday. In this way reporting is facilitated and clerical work reduced to a minimum.

For diseases like diphtheria, scarlet fever, and poliomyelitis, an individual report card containing more detailed information is requested for each case.

Report cards are supplied promptly on request from the office of the District Health Service or from the State Department of Health.

IMMUNE SERUM (GAMMA) GLOBULIN FOR MEASLES

The Department has available for distribution to physicians without cost, a supply of immune serum globulin for modification and prevention of measles. This preparation, secured from the blood

of donors who contributed so willingly during the years of World War II, has been supplied through the American Red Cross.

DOSAGE

The amounts of immune globulin used, dependent upon age and whether the disease is to be modified or prevented, are as follows:

Age	For Modification (cc.)	For Prevention (cc.)
Up to 6.....	0.5-1.0	1.5-2.0
Over 6 .....	2.0-3.5	5.0

TIME OF ADMINISTRATION

"For either prevention or modification of the disease, the globulin should be administered within the first six days after initial exposure, but will probably exert some effect until about the tenth day, particularly if the dose is increased."

PLASMA UNITS AVAILABLE TO PHYSICIANS

In the February issue of the JOURNAL, pages 56-57, announcement was made of the availability of dried plasma, declared surplus by the Army and Navy and released to the American Red Cross for distribution through State Health Agencies.

The Department has received an allotment of 5,535 units of plasma estimated to be adequate for the three month period, February, March and April, 1946. Shipment of plasma has been made to hospitals in all parts of the state, the quantity depending upon the number of hospital beds and physicians in the community.

Each package of plasma is complete, including distilled water, necessary accessory supplies and instructions regarding use.

Physicians desiring to have a plasma unit conveniently at hand may obtain it from a nearby hospital, from the District Health Service, or from the Serum-Plasma Center, Iowa State Department of Health. Individual packages of plasma will be supplied promptly on request.

MORBIDITY REPORT

Disease	Jan. '46	Dec. '45	Jan. '45	Most Cases Reported From
Diphtheria .....	18	31	21	Audubon, Cerro Gordo, Clarke
Scarlet Fever .....	207	138	389	Polk, Des Moines, Woodbury
Typhoid Fever .....	4	0	0	Appanoose, Cass, Floyd
Smallpox .....	0	1	0	.....
Measles .....	397	19	127	Carroll, Cerro Gordo, Humboldt
Whooping Cough .....	39	28	32	Dubuque, Woodbury, Linn
Brucellosis .....	6	0	8	Mitchell, Ringgold, Hardin
Chickenpox .....	142	159	354	Page, Boone, Johnson
German Measles .....	4	4	0	Boone, Guthrie, Osceola
Influenza .....	59	649	0	Winnebago, Mitchell
Malaria .....	70	28	4	Polk, Woodbury, Allamakee
Meningococcus Meningitis .....	11	14	8	Polk, Black Hawk, Buchanan
Mumps .....	149	79	380	Des Moines, Story, Woodbury
Pneumonia .....	27	*521	43	Black Hawk, Clinton, Marion
Poliomyelitis .....	8	6	0	Tama, Cerro Gordo, Chickasaw
Tuberculosis .....	56	34	53	For the State
Gonorrhea .....	226	182	266	For the State
Syphilis .....	125	115	143	For the State

\*507 of the 521 cases represent reports from Iowa Hospitals for the period July-December, 1945.



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A PROPOSED CHANGE IN THE AID TO THE

BLIND PROGRAM

The State Board of Social Welfare is initiating a new procedure for medical care of the needy blind which, if successful, will be applied to the medical part of the old age assistance program. The experiment is being conducted with the smaller group in order to determine its workability and practicability.

Instead of having Dr. Channing Smith, medical consultant for the State Board of Social Welfare, determine the monthly medical grant to the needy blind, an advisory committee of the county medical society will make this determination. This decentralizes the program and places the responsibility in the local community and with the medical profession.

If this works satisfactorily, it is planned to put the program on a postpayment basis, rather than the monthly grant. Under this procedure, after medical service is rendered to a recipient of the aid to the blind program, the physician will submit his bill to the advisory committee. After approval of the bill, payment in that amount will be made to the recipient who will be supposed to turn it over to the physician.

It is probable that the committee which has audited relief bills can assume this responsibility. The number of recipients of aid to the blind is not large and the new plan will not entail a great deal of work for them. However, it will provide experience for eventually turning over the old age assistance program to county authority. We believe this new system has many merits and that the physicians will benefit greatly from it, particularly

if it is applied to the old age assistance program. We know that the cooperation of county committees will be forthcoming when they understand the program, and that they will do the same excellent work here as they have done in the past in the auditing of relief bills.

THE USE OF PHYSOSTIGMINE IN ARTHRITIS

A great deal of interest has been aroused by recent lay articles and medical contributions regarding the use of physostigmine for muscle spasm in rheumatoid arthritis. Remedies in the treatment of arthritis continually have been hailed with great enthusiasm and only too frequently have not stood the test of time. However, the effects of prostigmine in the relief of muscle spasm has attained a prominent place in a wide variety of diseases in which muscular paralysis, spasm, spasticity, and cramps, painful or otherwise, are important symptoms. Pohl has called attention to the relief of muscle spasm in conjunction with the use of fomentations in accord with the Kenny technic in the treatment of infantile paralysis. Schaubel has observed encouraging results with the use of this drug in the treatment of spastic cerebral paralysis.

Cohen, Trommer and Goldman recently have presented the results of their work with physostigmine in the treatment of rheumatoid arthritis and allied conditions. Their particular object was to prevent deformities, lessen the severity of deformities already formed, simplify the drug used, lessen the cost to the patient, and relieve pain. They reported fewer untoward reactions with physostigmine than with neostigmine (prostigmine). They also observed fewer complaints of pain from local reactions after injection of physostigmine salicylate. They found muscle spasm was relieved and therefore pain was relieved in many instances. This relief was a common finding and was frequently observed within thirty minutes after injection. Patients treated with this drug included cases of Feltz's syndrome, spondylitis, generalized rheumatoid arthritis, sacroiliac arthritis with sciatica, bursitis, and scalenus anticus syndrome. They reported successful treatment which is inexpensive and which acts rapidly even though the condition has persisted for many years. As a result, active as well as passive motion in the affected joints is more easily carried out with less pain. Physostigmine salicylate was used in dosages of 1/100 to 1/50 grain, accompanied by atropine sulfate in dosages of 1/150 to 1/100 grain.

More carefully controlled studies will be necessary before general acceptance of this method of

treatment for rheumatoid arthritis will meet the demand arising from the glowing accounts given in lay journals. It would appear that the use of this drug will make the patient comfortable even though the underlying condition cannot be considered as cured.

#### MINIMUM UNIFORM FEE SCHEDULE

The Michigan State Medical Society has recently accomplished a bit of constructive action outlining a Uniform Fee Schedule for Governmental Agencies. This schedule has been officially adopted by the Michigan State Society for wards and dependents of government, effective January 1, 1946.

The physicians of Michigan believed that the costs of medical care should be evaluated on a similar basis with any other commodity; in other words, the State of Michigan was forced to pay as much for a truck whether it was to be used for hauling material to the State Capitol building or to a county poor farm. It was therefore considered that medical care should command the same fee whether the individual being treated were an occupant of the State Capitol or the county poor farm. With this in mind various committees carefully considered the contentious problem of medical fees. Too often we are led to believe that we as physicians set our own fee and we lose sight of the fact that in the long run the fee is really determined by the individual patient. For instance, if the patient feels the fee is too high, he either pays nothing or what he believes is a reasonable expenditure for the services received. Coercion to obtain the balance is often far from successful.

It is anticipated that this uniform fee schedule as arranged for governmental agencies in Michigan will be adopted in the future by all groups, such as state agencies, aid to the blind program, vocational rehabilitation, etc. It is understood that this is a *minimum* fee schedule and is considered flexible to the extent that any fee may be raised upon occasion. It has the advantage of affording in one brochure a reasonably official basis for the public to judge just what the expense of any medical or surgical procedure will cost.

Here in Iowa we have a fee schedule as worked out by Iowa Medical Service. Other groups have in the past published fee schedules which differ in certain respects. The Michigan plan certainly has definite advantages in that it may be used not only by governmental agencies but for any public or private group in the state.

#### REACTION OF PHYSICIANS TO MEDICAL SERVICE PLAN

Recently Dr. Arthur E. Perley of Waterloo conducted a personal, unofficial poll of Michigan physicians concerning their attitude toward the medical service plan adopted by their state society. One hundred physicians selected at random were questioned. There were sixty returns, of which eleven were blank, leaving forty-nine replies or approximately 50 per cent. The following is an analysis of the forty-nine replies:

1. Do you think the adoption of such a plan in each state will aid in preventing the passage of the Wagner-Murray-Dingell bill? Yes, 81%; No, 8%; No opinion, 11%.

2. Do you like the plan you now have? Is it successful? Yes, 87.7%; No, 4.3%; No opinion, 8%.

3. Is there a definite demand for such a plan from the public, or unions, or is it from railroads and other big industrial concerns? Public, 73.4%; Unions, 30.6%; Industry, 26%; All three, 8%.

4. What is the attitude of physicians returning from military service in regard to the plan? Yes, 36.5%; No, 2%; No opinion, 61%.

5. What are the abuses, if any, of your plan: (a) Do patients try to take unfair advantage of it? Yes, 20.4%; No, 55%; No opinion, 25%. (b) Are there those being benefited who should not be included in it? Yes, 16.3%; No, 45.3%; No opinion, 18%. (c) Are there any physicians who perform unnecessary operations or make unnecessary visits? Yes, 6%; No, 47%; No opinion, 22%.

The disparity in the percentages in questions 3 and 5 are accounted for by the manner in which the questions were answered. In question 3, for instance, some answered by stating only public or unions, others giving two or even three as demanding a plan. In question 5 only those who made specific statements were counted.

A poll probably can be misleading, but one fact is fairly safe to assume and that is that the people who are willing and ready to voice their opinions generally dominate a group. There may be a large percentage of physicians in Michigan who are indifferent to their plan.

It is interesting to note that the great majority of those polled believe the plan would aid in preventing state medicine and that the great majority liked the plan and thought it successful. The Iowa Medical Service is even more liberal than Michigan in that the hospitalization clause has been eliminated from surgery, obstetrics, and fracture work. Consequently the small town doc-



tor can benefit more in Iowa than he could under the Michigan plan.

The JOURNAL wishes to commend Dr. Perley for his exceptional interest in the medical service plan. Such evidence of support is highly gratifying to those who have devoted so much time and effort to the plan and assures the ultimate success of Iowa Medical Service.

#### ANNUAL CONFERENCE OF STATE SECRETARIES AND EDITORS

The annual conference of state secretaries and editors was held in Chicago February 8 and 9, with a large number of physicians in attendance. Dr. R. L. Sensenich of South Bend, chairman of the Board of Trustees of the American Medical Association, greeted the conference. Dr. Creighton Barker of Connecticut was elected chairman and presided over the two day meeting.

Mr. J. W. Holloway discussed the current status of medical legislation, saying the Hill-Burton hospital bill was halfway enacted and probably would become law. He told of changes made in the G. I. Bill of Rights which benefited the medical officer, and said no hearings had been scheduled on the new Wagner-Murray-Dingell bill or the Pepper bill. Dr. Joseph W. Lawrence of Washington discussed his talk, telling of experiences in New Zealand with state medicine. The cost was 5 per cent at first and has now risen to 8 per cent, and most persons agree it will probably go higher.

Dr. F. S. Crockett of Indiana discussed plans for medical care in rural areas, telling of the work done and the interest shown by the Farm Bureau Federation and other farm groups, particularly among the women. He said the Farm Bureau was opposed to compulsory legislation, and that it recognized the problem of getting young men into rural areas. He felt the Hill-Burton bill would help such areas. He asked all states to appoint a committee on rural health to work on this problem.

In the afternoon Major General George F. Lull, Associate General Manager of the American Medical Association, discussed state plans for aid to returning medical veterans. He explained the work being done in the Association office in its Bureau of Information, and said further that the Council on Medical Education and Hospitals was making a survey every six weeks to determine available residencies in the various specialties. Dr. Victor Johnson told what the American Medical Association had done in preparation for the return of medical officers, but said that twice as many residencies were needed as before the war. He said most medical officers will be discharged

within a year, and stated further that veterans do not count against the hospital's quota of residencies. The 9-9-9 system is being discontinued, and about 2,000 residencies will be available April 1. Temporary approval of residencies is now being given in two weeks' time. Eventually there will be an average of 5,000 residencies annually.

Mr. Robert C. Ayers also spoke on this same subject, in his capacity as director of the War Property Distribution of the Federal Security Administration. He said a price of 40 per cent of the fair value of an article was made for health agencies, but that first priority went to the federal government, second priority to state and local governments, third to veterans, and fourth to non-profit institutions. This places the veteran too far down the list to be of much value to him, and so far the surplus property distribution has meant nothing to the veteran. He mentioned the many changes made in policy and the other difficulties and said that although there was a bill now pending to give the veteran second place in priority, the whole system needed simplifying and stabilizing.

Colonel James C. Harding discussed plans for furnishing medical care to veterans, stressing the fact that cooperation with medical schools was being sought and every effort was being made to raise the standard of medical care by the use of civilian consultants who will be paid on a visit basis with an annual limit of \$6,000.00. He gave figures on the needs for more physicians, beds, etc., and mentioned the difficulties involved in providing prompt service, but reiterated the insistence of the leaders of the Veterans Administration for the best medical care for veterans.

Dr. L. Fernald Foster of Michigan discussed the program briefly, saying that Michigan had made a fee schedule for governmental agencies, and that it was to be used for care of the veterans in Michigan. This schedule is applied in all work done for a governmental agency, no matter who the patient.

The Friday evening meeting consisted of a clinic on editorial problems, with all editors entering into the discussion of which type of editorials should be written, scientific or economic; whether a section should be devoted to letters to the editor; how county society meetings are publicized; how much is done for the Woman's Auxiliary; and the method of handling book reviews.

Dr. Morris Fishbein was the first speaker of the Saturday morning program, dealing with public relations of American medicine. He said there were two kinds of public relations, one within the medical profession itself and one with the public.

(Continued on page 118)

## American Red Cross Assists in Civilian Blood and Blood Derivative Programs

It is quite possible in the near future that sufficient quantities of whole blood and plasma may be available in many states and cities without searching for a donor with matching blood or one to replace what is used, or worrying any patient about the cost.

Dried human plasma is already available throughout the country. There will be no charge made for this plasma, either to physicians, hospitals or patients. It is Army and Navy surplus being returned to the American people, from whence it came, through the American Red Cross. This plan has been carefully worked out by the American Red Cross in cooperation with the Association of the State and Territorial Health Officers and has the approval of the American Medical Association and the American Hospital Association.

The supply of plasma for military use was predicted upon the needs of the Army and the Navy for a long and costly war. From the beginning of the program established by the American Red Cross to meet these requirements, the people throughout the entire country were told what it would mean to their husbands, sons, and brothers to have plasma on the spot when it was needed. The response was overwhelming. Every over-all quota set by the Army and the Navy was met to the pint.

When the war ended, the military found that they had on hand a surplus of dried plasma—approximately a million and a quarter packages. Disposal of this surplus was no problem. Federal law required that it be returned to the American Red Cross which in turn began making plans for distribution to the people. Within a short time, the plans were formulated and approved for distribution of the plasma without charge through state departments of health to all physicians and hospitals for civilian use. As soon as states completed their distribution plans a supply of plasma was shipped by the American Red Cross. There is an estimated two years' supply—awaiting use by the medical profession to treat patients here at home. In addition to the civilian supply, sufficient quantities of these plasma reserves are being made available to the Veterans Administration and to the Marine hospitals of the United States Public Health Service to last the next five years.

So much for the plasma surplus. Still there remains a need for whole blood for medical use now and to provide a means for securing blood for plasma and other vital blood derivatives when the reserves are no longer existent.

Keenly aware of what it would mean to civilians to establish blood donor programs, many medical and lay groups requested the Red Cross to assist in these

programs as it had in the Army-Navy program. Through its chapters (which together serve every county and city in the United States) the American Red Cross is now prepared to help every community obtain the valuable blood needed in peacetime. The policy under which a chapter may participate in such a program, however, provides that certain conditions be fulfilled.

First, the project must be sponsored by a recognized medical or health agency, which is to be responsible for any processing into various products other than whole blood, as well as for distribution within the area served by the program. Second, the sponsoring agency must agree to furnish the blood or any blood derivatives without charge to hospitals, physicians, or patients. Third, the processing, examining and typing must be done in accordance with approved standards.

The Red Cross chapters may participate by conducting any of the following activities: (1) recruitment or enrollment of the volunteer donors, or both; (2) provision of nontechnical staff and equipment; (3) assumption of responsibility for the operation of all nontechnical aspects of the center; and (4) assumption of full responsibility for the center's operation, including provision of both technical and nontechnical staff and equipment with proper supervision. The chapter itself may finance any part of the project which it agrees to undertake.

Already, a civilian blood donor service with Red Cross chapter assistance is in operation on a state-wide basis in Michigan, Massachusetts, and North Dakota; as a county program in Riley County, Kansas; and as a city undertaking in Los Angeles. The state departments of health are the sponsoring agencies in all three state-wide programs, the county medical societies of the other two projects. The Massachusetts, Riley County, and Los Angeles programs are supplying whole blood, Michigan and North Dakota programs have been furnishing plasma but plans are being made to expand their activities and incorporate the supply of whole blood.

Several other states and large cities are working out peacetime blood donor programs with Red Cross participation.

The war pointed up the need for steady and immediately available supplies of blood and plasma. If states and communities desire to establish blood and blood derivative programs, the American Red Cross, with the cooperation of the people themselves, is prepared and willing to assist, and no one need ever die from the lack of blood or its derivatives. This will be a significant milestone in the progress of medicine.



**YOUR RED CROSS MUST CARRY ON.  
GIVE NOW TO THE 1946 RED CROSS FUND CAMPAIGN.**



## *President's Page*

### **A Step in the Right Direction**

During the week of February 11, each county society secretary received notification of a change in the procedure for handling the medical aid to the needy blind. The same subject is discussed editorially in this issue.

This change is the result of months of study by Dr. Charles Maxwell, who is medical economics chairman for the Committee on Medical Service and Public Relations, and Dr. Channing Smith, medical consultant for the State Board of Social Welfare. These physicians found they could not change the law, but they do offer you a marked improvement in the method of handling these cases. In addition, Dr. Smith hopes that if this plan proves satisfactory, it will be extended to the old age assistance program. The experience gained in the new setup will determine that.

Dr. Smith is now engaged in making a survey of methods being used in other states and hopes to have a representative of the State Medical Society accompany him. Iowa is most fortunate to have a man of Channing Smith's type as medical consultant to the Board of Social Welfare. As most of you know, he made an excellent record while president of the State Society. In recent years he has devoted his entire time to the Board's work, checking the reports himself. He knows the physicians' problems, and has been insistent that medical care must be prompt, scientific, and adequate. He also realizes he is distributing the taxpayers' money, and he wants value received for every dollar spent.

In the proposed change he places his entire confidence in the "Iowa Plan" of handling these problems on a county level. The new plan is the proper approach to the solution of a very perplexing problem, and I am sure the county societies will give it excellent support.

*R. S. Bernard, M.D.*

*President, Iowa State Medical Society*

# COUNTY MEDICAL SOCIETY OFFICERS

COUNTY	PRESIDENT	SECRETARY	DEPUTY COUNCILOR
Adair.....	A. J. Gantz, Greenfield.....	A. S. Bowers, Orient.....	A. S. Bowers, Orient
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Audubon.....	R. H. Payne, Exira.....	W. H. Halloran, Audubon.....	L. E. Jensen, Audubon
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Black Hawk.....	B. C. Boston, Waterloo.....	C. A. Waterbury, Jr., Waterloo.....	A. J. Joynet, Waterloo
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Cass.....	R. M. Needles, Atlantic.....	W. F. Giegerich, Atlantic.....	
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Clay.....	E. E. Munger, Jr., Spencer.....	C. C. Colleston, Spencer.....	C. C. Colleston, Spencer
Clayton.....	P. R. V. Hommel, Elkader.....	T. W. Lichter, Edgewood.....	P. R. V. Hommel, Elkader
Clinton.....	T. Lenaghan, Clinton.....	Elsie R. Carrington, Clinton.....	R. F. Luse, Clinton
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Emmett.....	S. C. Kirkegaard, Estherville.....	L. W. Loving, Estherville.....	J. C. Painter, Dubuque
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Franklin.....	J. C. Powers, Hampton.....	F. L. Siberts, Hampton.....	R. A. Fox, Charles City
Freemont.....	Ralph Lovelady, Sidney.....	A. E. Wanamaker, Hamburg.....	J. C. Powers, Hampton
Greene.....	L. C. Nelson, Jefferson.....	J. R. Black, Jefferson.....	A. E. Wanamaker, Hamburg
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Hardin.....	W. H. Van Tigr, Eldora.....	F. N. Cole, Iowa Falls.....	C. V. Hamilton, Garner
Harrison.....	R. H. Cutler, Little Sioux.....	F. H. Hanson, Magnolia.....	G. F. Dolmage, Buffalo Center
Henry.....	J. S. Jackson, Mt. Pleasant.....	B. B. Gloeckler, Mt. Pleasant.....	F. N. Cole, Iowa Falls
Howard.....	W. A. Bockoven, Cresco.....	F. E. Giles, Cresco.....	S. W. Huston, Mt. Pleasant
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Iowa.....	L. A. Miller, North English.....	I. J. Sinn, Williamsburg.....	E. S. Parker, Ida Grove
Jackson.....	E. V. Andrew, Maquoketa.....	J. J. Tilton, Bellevue.....	I. J. Sinn, Williamsburg
Jasper.....	F. F. Frech, Newton.....	T. D. Wright, Newton.....	F. J. Swift, Maquoketa
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Jones.....	J. D. Paul, Anamosa.....	C. R. Smith, Wyoming.....	G. C. Albright, Iowa City
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Kossuth.....	P. V. Janse, Algona.....	M. G. Bourne, Algona.....	D. L. Grothaus, Delta
Lee.....	W. M. Hogle, Keokuk.....	H. F. Noble, Fort Madison.....	J. G. Clapsaddle, Burt
Linn.....	C. S. Day, Cedar Rapids.....	D. S. Challed, Cedar Rapids.....	R. L. Feightner, Ft. Madison
Louisia.....	J. W. Pence, Columbus Junction.....	L. E. Weber, Wapello.....	B. L. Gilfillan, Keokuk
Lucas.....	A. L. Yocom, Jr., Chariton.....	R. E. Anderson, Chariton.....	B. F. Wolverton, Cedar Rapids
Lyon.....		J. H. Sherlock, Rock Rapids.....	J. H. Chittum, Wapello
Madison.....	H. E. Carver, Earlham.....	E. M. Olson, Winterset.....	S. L. Throckmorton, Chariton
Mahaska.....	C. N. Bos, Oskaloosa.....	F. A. Gillett, Oskaloosa.....	G. M. DeYoung, George
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Mills.....	W. A. DeYoung, Glenwood.....	T. E. Shonka, Malvern.....	H. L. Bridgeman, Knoxville
Mitchell.....	M. O. Eiel, Osage.....	R. L. Whitley, Osage.....	A. D. Woods, State Center
Monona.....	E. J. Liska, Ute.....	E. E. Gingles, Onawa.....	D. W. Harman, Glenwood
Monroe.....	H. J. Richter, Albia.....	I. A. Moran, Melrose.....	T. S. Walker, Riceville
Montgomery.....	L. R. Moriarty, Villisca.....	Helge Borre, Red Oak.....	C. W. Young, Onawa
Muscatine.....	J. L. Klein, Jr., Muscatine.....	K. E. Wilcox, Muscatine.....	C. C. Fowler, Lovilia
O'Brien.....	W. W. Hayne, Paullina.....	W. S. Balkema, Sheldon.....	Oscar Alden, Red Oak
Osceola.....	E. S. Aeilts, Sibley.....	Frank Rizzo, Sibley.....	T. F. Beveridge, Muscatine
Page.....	H. McK. Bunch, Shenandoah.....	J. F. Aldrich, Shenandoah.....	W. R. Brock, Sheldon
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Plymouth.....	M. J. Joynet, Le Mars.....	L. C. O'Toole, Le Mars.....	W. H. Maloy, Shenandoah
Pocahontas.....	W. F. Brinkman, Pocahontas.....	C. L. Jones, Gilmore City.....	H. L. Brereton, Emmetsburg
Polk.....	M. I. Olsen, Des Moines.....	E. W. Anderson, Des Moines.....	W. L. Downing, Le Mars
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Poweshiek.....	H. C. Parsons, Grinnell.....	C. E. Harris, Grinnell.....	J. B. Synhorst, Des Moines
Ringgold.....	O. L. Fullerton, Redding.....	J. W. Hill, Mt. Ayr.....	G. N. Best, Council Bluffs
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Scott.....	W. C. Goenne, Davenport.....	J. H. Sunderbruch, Davenport.....	E. J. Watson, Diagonal
Shelby.....	J. P. McGowan, Harlan.....	A. L. Nielson, Harlan.....	J. R. Dewey, Schaller
Sioux.....	E. B. Grossmann, Orange City.....	C. B. Murphy, Alton.....	A. P. Donohoe, Davenport
Story.....	L. E. Rosebrook, Ames.....	W. B. Armstrong, Ames.....	L. Nielson, Harlan
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Taylor.....	W. H. Cash, Lenox.....	J. H. Gasson, Bedford.....	Bush Houston, Nevada
Union.....	J. A. Liken, Creston.....	C. E. Sampson, Creston.....	A. A. Pace, Toledo
Van Buren.....	Roscoe Pollock, Douds-Leando.....	L. A. Coffin, Farmington.....	G. W. Rimel, Bedford
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Warren.....	M. B. Cunningham, Norwalk.....	C. H. Mitchell, Indianola.....	L. A. Coffin, Farmington
Washington.....	E. D. Miller, Wellman.....	W. S. Kyle, Washington.....	C. A. Henry, Farson
Wayne.....	D. R. Ingraham, Sewal.....	C. F. Brubaker, Corydon.....	C. H. Mitchell, Indianola
Webster.....	T. J. Dorsey, Fort Dodge.....	W. C. Thatcher, Fort Dodge.....	E. D. Miller, Wellman
Winnebago.....	R. N. Svendsen, Decorah.....	H. H. Ennis, Decorah.....	J. H. McCall, Allerton
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			S. S. Westly, Manly
			J. H. Sams, Clarion



# Roster of Iowa Physicians in Military Service

As of February 20, 1946

## Allamakee County

Ivens, M. H., Waukon (Miami Beach, Fla.).....Capt., A.U.S.

## Appanoose County

Condon, F. J., Centerville (Owensboro, Ky.)..Major, U.S.P.H.S.  
Edwards, R. R., Centerville (APO 758, New York,  
N. Y.).....Major, A.U.S.  
Huston, M. D., Centerville (Hot Springs, Ark.).....Capt., A.U.S.

## Benton County

Senfeld, Sidney, Belle Plaine

## Black Hawk County

Bickley, D. W., Waterloo (APO New York, N. Y.)..Capt., A.U.S.  
Bickley, J. W., Waterloo (APO 956, San Francisco,  
Cal.).....Capt., A.U.S.  
Ericsson, M. G., Cedar Falls (Fort Bragg, N. Car.)..Capt., A.U.S.  
Hartman, H. J., Waterloo.....Capt., A.U.S.  
Marquis, F. M., Waterloo (APO 513, New York  
N. Y.).....Capt., A.U.S.  
Smith, R. G., Cedar Falls (APO 512, New York,  
N. Y.).....Major, A.U.S.

## Boone County

Brewster, E. S., Boone (APO 254, New York, N. Y.)..Major, A.U.S.

## Buena Vista County

Hansen, R. R., Storm Lake.....Lt., U.S.N.R.  
Shope, C. D., Storm Lake (Fort Des Moines, Ia.)..Capt., A.U.S.  
Witte, H. J., Marathon (APO 350, New York,  
N. Y.).....Major, A.U.S.

## Butler County

James, R. A., Allison (Mare Island, Cal.)

## Calhoun County

McVay, M. J., Lake City (Waco, Texas).....Capt., A.U.S.

## Carroll County

Cochran, J. L., Carroll (Gulfport, Miss.)  
Freedland, Maurice, Coon Rapids  
Scannell, R. C., Carroll (Denver, Colo.).....Capt., A.U.S.  
Wyatt, M. R., Manning (Chatham Field, Ga.).....Capt., A.U.S.

## Cass County

Ergenbright, W. V., Atlantic (APO 331, San Francisco,  
Cal.).....Capt., A.U.S.  
Peterson, M. T., Atlantic (Fleet PO, San Francisco,  
Cal.).....Capt., A.U.S.  
Schiff, Joseph, Anita (Walla Walla, Wash.).....Capt., A.U.S.

## Cedar County

Laughlin, R. M., Tipton (San Diego, Cal.).....Lt., U.S.N.R.

## Cerro Gordo County

Adams, C. O., Mason City (Fort Lewis, Wash.)...Major, A.U.S.  
Fitzpatrick, M. R., Mason City (Ft. Dix, N. J.)...1st Lt., A.U.S.  
Harris, R. H., Mason City (Cando, N. Dak.).....Major, A.U.S.  
†Harrison, G. E., Mason City.....Col., A.U.S.  
Morgan, P. W., Mason City (APO 519, New York,  
N. Y.).....Capt., A.U.S.  
Mullen, L. M., Mason City (Kansas City, Mo.).....Capt., A.U.S.  
Tice, G. I., Mason City (Mare Island, Cal.).....Lt., U.S.N.R.  
Tice, W. A., Mason City (Jacksonville, Fla.).....Lt. (jg), U.S.N.R.  
Woodward, E. R., Mason City (Great Lakes, Ill.)...Lt., U.S.N.R.

## Clarke County

Armitage, G. I., Murray (APO 629, New York,  
N. Y.).....Capt., A.U.S.

## Clayton County

Glesne, O. G., Monona (Knoxville, Iowa).....Capt., A.U.S.

## Clinton County

Amesbury, H. A., Clinton.....Major, A.U.S.  
Burke, J. C., Clinton (Great Bend, Kan.).....A.U.S.  
O'Donnell, J. E., Clinton.....Lt., U.S.N.R.  
Speigel, I. J., Clinton (Galesburg, Ill.).....Capt., A.U.S.  
Wagoner, C. V., Clinton.....Lt. Comdr., U.S.N.R.  
Wells, L. L., Clinton.....Capt., A.U.S.

## Crawford County

Grau, A. H., Denison (Oceanside, Cal.).....Comdr., U.S.N.R.

## Dallas-Guthrie Counties

Butterfield, E. T., Dallas Center (Palm Springs,  
Cal.).....1st Lt., A.U.S.  
Byrnes, A. W., Guthrie Center (Fort Custer, Mich.)..Major, A.U.S.  
Mullmann, A. J., Adel (APO 565, San Fran-  
cisco, Cal.).....Capt., A.U.S.  
Osborn, C. R., Dexter.....Lt., U.S.N.R.

## Delaware County

Baumgarten, Oscar, Earlville.....Capt., A.U.S.

## Des Moines County

Eigenfeld, M. L., Burlington (Cleveland, Ohio)....1st Lt., A.U.S.  
Sage, E. C., Burlington (Fleet PO, San Francisco,  
Cal.).....Lt. Comdr., U.S.N.R.

## Dickinson County

Buchanan, J. J., Milford (Fleet PO, San Francisco,  
Cal.).....Lt. Comdr., U.S.N.R.

## Dubuque County

Anderson, E. E., Dubuque (Bradley Field, Conn.)...Capt., A.U.S.  
Cunningham, J. C., Dubuque (Fairfield, Ohio)....Capt., A.U.S.  
Edstrom, Henry, Dubuque (Galesburg, Ill.).....Lt. Col., A.U.S.  
†Hall, C. B., Dubuque.....Capt., A.U.S.  
Knoll, A. H., Dubuque (San Francisco, Cal.).....Major, A.U.S.  
Lavery, H. B., Dubuque (Washington, D. C.).....Lt. Col., A.U.S.  
Leik, D. W., Dubuque (Wichita Falls, Tex.).....Capt., A.U.S.  
Mueller, J. J., Dubuque (APO 230, New York, N. Y.)..Capt., A.U.S.  
Olson, P. F., Dubuque (San Francisco, Cal.)..Lt. Comdr., U.S.N.R.  
Painter, R. C., Dubuque (Cheyenne, Wyo.)..Lt. Comdr., U.S.N.R.  
Scharle, Theodore, Dubuque (Ft. Sam Houston,  
Texas).....Capt., A.U.S.  
Smith, C. W., Dubuque (Shoemaker, Cal.).....Lt., U.S.N.R.  
Straub, J. J., Dubuque (Bethesda, Md.).....Lt. Comdr., U.S.N.R.

## Emmet County

Collins, L. E., Esterville (APO 247, San Fran-  
cisco, Cal.).....1st Lt., A.U.S.

## Fayette County

Henderson, W. B., Oelwein (APO 234, San Francisco,  
Cal.).....Lt. Col., A.U.S.  
Sulzbach, J. F., Oelwein  
Walsh, E. W., Hawkeye (Huntington, W. Va.).....A.U.S.

## Floyd County

Huber, R. H., Charles City.....1st Lt., A.U.S.  
Mackie, D. G., Charles City (Danville, Ind.).....Capt., A.U.S.  
Magdsick, Carl, Charles City (Green Cove Springs,  
Fla.).....Lt., U.S.N.R.

## Franklin County

Hedgecock, L. E., Hampton (Camp Lejeune,  
N. Car.).....Lt. Comdr., U.S.N.R.  
Randall, W. L., Hampton (Fleet PO, San Fran-  
cisco, Cal.).....Lt. Comdr., U.S.N.R.

## Fremont County

Kerr, W. H., Hamburg (APO 926, San Francisco,  
Cal.).....Capt., A.U.S.

## Greene County

Cartwright, F. P., Grand Junction (Colorado Springs,  
Colo.).....Capt., A.U.S.

## Grundy County

Cullison, R. M., Dike (Fort Howard, Md.).....Major, A.U.S.

## Hamilton County

Mooney, F. P., Jewell.....Capt., A.U.S.  
Schrader, M. A., Webster City (Topeka, Kan.).....1st Lt., A.U.S.

## Hancock-Winnebago Counties

Irish, T. J., Forest City (San Diego, Cal.).....Comdr., U.S.N.R.  
Shaw, D. F., Britt (APO 334, San Francisco, Cal.)..Major, A.U.S.

## Hardin County

Steenrod, E. J., Iowa Falls (Oceanside, Cal.)..Lt. Comdr., U.S.N.R.

## Henry County

Brown, W. B., Mount Pleasant (APO 571, New York,  
N. Y.).....Major, A.U.S.  
Cogan, Samuel, Mt. Pleasant  
Dwankowski, Carl, Mt. Pleasant (APO 511,  
New York, N. Y.).....Major, A.U.S.  
Ristine, L. P., Mt. Pleasant (Denver, Colo.).....Major, A.U.S.

## Humboldt County

Coddington, J. H., Humboldt (APO 719, San  
Francisco, Cal.).....Capt., A.U.S.

## Ida County

Martin, J. W., Holstein (Albany, Ga.).....Capt., A.U.S.

## Iowa County

Geiger, U. S., North English (Kansas City,  
Mo.).....Lt. Comdr., U.S.N.R.

## Jackson County

Bausch, R. G., Bellevue (APO 251, New York,  
N. Y.).....Capt., A.U.S.  
Skelley, P. B., Jr., Maquoketa (APO 247, San  
Francisco, Cal.).....1st Lt., A.U.S.

**Jasper County**

Doake, Clarke, Newton.....1st Lt., A.U.S.  
 Ritchey, S. J., Newton.....Lt. Col., A.U.S.

**Jefferson County**

Frey, Harry, Fairfield (Norfolk, Va.).....Lt. Comdr., U.S.N.R.  
 Graber, H. E., Fairfield (APO 75, San Francisco, Cal.).....Lt. Col., A.U.S.  
 Taylor, I. C., Fairfield (Washington, D. C.).....1st Lt., A.U.S.

**Johnson County**

Albert, S. M., Iowa City.....Capt., A.U.S.  
 Bunge, R. G., Iowa City (Orlando, Fla.).....Capt., A.U.S.  
 Cobb, E. A., Iowa City (APO 14987, San Francisco, Cal.).....1st Lt., A.U.S.  
 Coburn, F. E., Iowa City (Toronto, Canada).....Capt., R.C.A.  
 Crowell, E. A., Iowa City (Ft. Geo. Wright, Wash.).....Capt., A.U.S.  
 Diddle, A. W., Iowa City (Fleet PO, San Francisco, Cal.).....Lt. Comdr., U.S.N.R.  
 Emmons, M. B., Iowa City (Camp Bowie, Texas).....Capt., A.U.S.  
 Evers, L. B., Iowa City.....Capt., A.U.S.  
 Field, Grace E., Iowa City (Denver, Colo.).....Major, U.S.P.H.S.  
 Flax, Ellis, Iowa City.....1st Lt., A.U.S.  
 Francis, N. L., Iowa City (Annapolis, Md.).....Lt. (jg), U.S.N.R.  
 Hartung, Walter, Iowa City (Camp Carson, Colo.).....Capt., A.U.S.  
 Hessin, A. L., Iowa City (APO 469, New York, N. Y.).....Major, A.U.S.  
 Irwin, R. L., Iowa City.....Capt., U.S.N.R.  
 January, L. E., Iowa City (Monahans, Texas).....Major, A.U.S.  
 Kanealy, J. F., Iowa City (APO 928, San Francisco, Cal.).....1st Lt., A.U.S.  
 Keislar, H. D., Iowa City (Washington, D. C.).....Capt., A.U.S.  
 Lage, R. H., Iowa City (San Francisco, Cal.).....Lt., U.S.N.R.  
 Laubscher, J. H., Iowa City (Ft. Benning, Ga.).....1st Lt., A.U.S.  
 Moreland, F. B., Iowa City (Maxwell Field, Ala.).....1st Lt., A.U.S.  
 Nagty, S. F., Iowa City (Fleet PO, New York, N. Y.).....Lt., U.S.N.R.  
 Ringrose, E. J., Iowa City.....Capt., A.U.S.  
 Sells, R. L., Jr., Iowa City (Palmdale, Cal.).....Capt., A.U.S.  
 Springer, E. W., Iowa City (APO 678, New York, N. Y.).....Capt., A.U.S.  
 Stadler, H. E., Iowa City (Washington, D. C.).....1st Lt., A.U.S.  
 Stephens, R. L., Iowa City (Orlando, Fla.).....Capt., A.U.S.  
 Stump, R. B., Iowa City (Denver, Colo.).....Capt., A.U.S.  
 Titus, E. L., Iowa City (Los Angeles, Cal.).....Col., A.U.S.  
 Trapasso, T. J., Iowa City (APO 520, New York, N. Y.).....Capt., A.U.S.  
 Voelker, C. A., Jr., Iowa City.....Capt., A.U.S.  
 Weatherly, H. E., Iowa City.....Major, A.U.S.  
 Wollmann, W. W., Iowa City (Louisville, Ky.).....1st Lt., A.U.S.  
 Ziffren, S. E., Iowa City (Springfield, Mo.).....1st Lt., A.U.S.

**Junior Members**

†Adams, M. P., Iowa City (Fleet PO, San Francisco, Cal.).....Lt. (jg), U.S.N.R.  
 Ahrens, J. H., Iowa City (APO San Francisco, Cal.).....A.U.S.  
 Bail, A. L., Iowa City (Camp Polk, La.).....Major, A.U.S.  
 Barrent, M. E., Iowa City (Camp Tyson, Tenn.).....Capt., A.U.S.  
 Black, N. M., Iowa City (APO New York, N. Y.).....Capt., A.U.S.  
 Blair, J. D., Iowa City (APO San Francisco, Cal.).....Major, A.U.S.  
 Boyd, R. J., Iowa City (Spokane, Wash.).....Capt., A.U.S.  
 Brintnall, E. S., Iowa City (APO New York, N. Y.).....Major, A.U.S.  
 Burr, S. P., Iowa City (APO San Francisco, Cal.).....1st Lt., A.U.S.  
 Carney, R. G., Iowa City (Fleet PO, San Francisco, Cal.).....Lt., U.S.N.R.  
 Connole, J. F., Iowa City (Camp Bowie, Texas).....1st Lt., A.U.S.  
 Couch, O. A., Iowa City (Camp Van Dorn, Miss.).....1st Lt., A.U.S.  
 Coulson, F. H., Iowa City (APO New York, N. Y.).....Capt., A.U.S.  
 Ehrenhaft, J. L., Iowa City (APO New York, N. Y.).....Capt., A.U.S.  
 Freiberg, M., Iowa City (Jefferson Barracks, Mo.).....A.U.S.  
 Hamilton, H. E., Iowa City (Chicago, Ill.).....1st Lt., A.U.S.  
 Harms, G. E., Iowa City (Carlisle Barracks, Penn.).....1st Lt., A.U.S.  
 Hendricks, A. B., Iowa City (Fleet PO, San Francisco, Cal.).....Lt. Comdr., U.S.N.  
 Hovis, Wm., Iowa City (Fleet PO, San Francisco, Cal.).....Lt. (jg), U.S.N.R.  
 Ide, L. W., Iowa City (Fort Warren, Wyo.).....1st Lt., A.U.S.  
 Kaplan, Nathan, Iowa City (Carlisle Barracks, Pa.).....1st Lt., A.U.S.  
 Keif, P. G., Iowa City (Sioux City, Iowa).....1st Lt., A.U.S.  
 Kelberg, M. R., Iowa City (Alameda, Cal.).....Lt., U.S.N.R.  
 Keleher, M. F., Iowa City (Great Lakes, Ill.).....Lt. (jg), U.S.N.R.  
 Lowry, F. C., Iowa City (Sioux Falls, S. D.).....1st Lt., A.U.S.  
 McCann, J. P., Iowa City (Carlisle Barracks, Penn.).....1st Lt., A.U.S.  
 McQuiston, W. O., Iowa City (APO San Francisco, Cal.).....Capt., A.U.S.  
 Moen, B. H., Iowa City (APO 755, New York, N. Y.).....Capt., A.U.S.  
 Moon, R. E., Iowa City (APO New York, N. Y.).....1st Lt., A.U.S.  
 Odell, Lester, Iowa City (Pensacola, Fla.).....Lt. (jg), U.S.N.R.  
 Phillips, R. M., Iowa City (San Francisco, Cal.).....1st Lt., A.U.S.  
 Randall, R. G., Iowa City (Waterloo, Iowa).....Capt., A.U.S.  
 Rosenbusch, M., Iowa City (Fort Leonard Wood, Mo.).....1st Lt., A.U.S.  
 Russin, L. A., Iowa City (Fort Blanding, Fla.).....Capt., A.U.S.  
 Saar, J. L., Iowa City (APO New York, N. Y.).....Major, A.U.S.  
 Sawtelle, W. W., Iowa City.....Lt., U.S.N.R.  
 Schwidde, J. T., Iowa City (Carlisle Barracks, Penn.).....1st Lt., A.U.S.

Shand, J. A., Iowa City (Carlisle Barracks, Penn.).....1st Lt., A.U.S.  
 Shapiro, S. I., Iowa City.....Capt., A.U.S.  
 Skewis, J. E., Iowa City (Corona, Cal.).....Lt. Comdr., U.S.N.R.  
 Skouge, O. T., Iowa City.....Capt., A.U.S.  
 Towle, R. A., Iowa City (Jacksonville, Fla.).....Lt. Comdr., U.S.N.R.  
 Watters, V. G., Iowa City (Fort Leonard Wood, Mo.).....1st Lt., A.U.S.  
 Wicks, W. J., Iowa City (Camp Crowder, Mo.).....Capt., A.U.S.  
 Williams, L. A., Iowa City (Treasure Island, Cal.).....1st Lt., A.U.S.  
 Willumsen, H. C., Iowa City (Denver, Colo.).....Capt., A.U.S.  
 Wolkin, J., Iowa City (San Antonio, Texas).....Capt., A.U.S.  
 Yetter, W. L., Iowa City (APO New York, N. Y.).....Major, A.U.S.  
 Zahrt, N. E., Iowa City (Keesler Field, Miss.).....Capt., A.U.S.  
 Zimmerman, H. A., Iowa City (Santa Ana, Cal.).....1st Lt., A.U.S.

**Keokuk County**

Engelmann, A. T., What Cheer (Camp Polk, La.).....Capt., A.U.S.  
 Graham, J. A., Gibson (Needies, Cal.).....1st Lt., A.U.S.

**Kossuth County**

Corbin, R. L., Luverne (Des Moines, Iowa).....Capt., A.U.S.  
 Kenefick, J. N., Algona (Fleet PO, San Francisco, Cal.).....Comdr., U.S.N.R.

**Lee County**

Cleary, H. G., Fort Madison (Ft. Benning, Ga.).....Capt., A.U.S.  
 Johnstone, A. A., Keokuk (APO 942, Seattle, Wash.).....Col., A.U.S.  
 McKee, T. L., Keokuk (Ft. Lauderdale, Fla.).....Major, A.U.S.  
 Richmond, A. C., Fort Madison (San Bruno, Cal.).....Comdr., U.S.N.R.  
 Younan, Thomas, Ft. Madison.....Capt., A.U.S.

**Linn County**

Block, W. M., Cedar Rapids.....Major, A.U.S.  
 Chapman, R. M., Cedar Rapids (Chicago, Ill.).....Major, A.U.S.  
 Coughlan, V. H., Coggon (Fort Snelling, Minn.).....A.U.S.  
 Gearhart, Merriam, Springville.....Lt. Col., A.U.S.  
 Hecker, J. T., Cedar Rapids (APO 408, New York, N. Y.).....Capt., A.U.S.  
 Leedham, C. L., Springville (Camp Campbell, Ky.).....Col., A.U.S.  
 Locher, R. C., Cedar Rapids (Temple, Texas).....Major, A.U.S.  
 †MacDougal, R. F., Cedar Rapids (APO 9057, New York, N. Y.).....Capt., A.U.S.  
 McQuiston, J. S., Cedar Rapids (Fort Warren, Wyo.).....Lt. Col., A.U.S.  
 Murray, E. S., Cedar Rapids (APO 512 New York, N. Y.).....Lt. Col., A.U.S.  
 Noble, W. C., Cedar Rapids (Camp San Luis Obispo, Cal.).....1st Lt., A.U.S.  
 Noe, C. A., Cedar Rapids (Hot Springs, Ark.).....Major, A.U.S.  
 Rieniets, J. H., Cedar Rapids, (Charleston, S. Car.).....Comdr., U.S.N.R.  
 Smrha, J. A., Cedar Rapids (Topeka, Kan.).....Capt., A.U.S.  
 Yavorsky, W. D., Cedar Rapids (Fleet PO, San Francisco, Cal.).....Comdr., U.S.N.

**Louisa County**

De Yarman, K. T., Morning Sun (APO 74, San Francisco, Cal.).....Capt., A.U.S.  
 Tandy, R. W., Morning Sun (Oakland, Cal.).....Comdr., U.S.N.R.

**Lyon County**

Cook, S. H., Rock Rapids (Camp Chaffee, Ark.).....Major, A.U.S.  
 Moriarity, F. J., Rock Rapids (Corvallis, Ore.).....Capt., A.U.S.

**Madison County**

Chesnut, P. F., Winterset (APO 411, New York, N. Y.).....Capt., A.U.S.

**Mahaska County**

Bennett, G. W., Oskaloosa (APO 9641, San Francisco, Cal.).....Lt. Col., A.U.S.  
 Bos, H. C., Oskaloosa (APO 758, New York, N. Y.).....Major, A.U.S.  
 Gillett, R. M., Oskaloosa (Fleet PO, San Francisco, Cal.).....Capt. U.S.N.  
 Hibbs, R. E., Oskaloosa.....Major, A.U.S.  
 Keohen, G. F., Oskaloosa.....Major, A.U.S.  
 Zager, L. L., Oskaloosa (APO 436, New York, N. Y.).....Capt., A.U.S.

**Marion County**

Ralston, F. P., Knoxville (Indio, Cal.).....Capt., A.U.S.  
 Schiek, C. M., Knoxville.....Lt. Comdr., U.S.N.R.  
 Schroeder, M. C., Pella (Camp Robinson, Ark.).....Capt., A.U.S.

**Marshall County**

Wolfe, R. M., Marshalltown (Los Alamitos, Cal.).....Lt. Comdr., U.S.N.R.

**Mills County**

Kuitert, J. H., Glenwood (St. Cloud, Minn.).....Major, A.U.S.

**Mitchell County**

Culbertson, R. A., St. Ansgar (APO 331, San Francisco, Cal.).....Lt. Col., A.U.S.  
 Owen, W. E., Osage (San Diego, Cal.).....Lt., U.S.N.  
 Walker, T. G., Riceville (Hutchinson, Kan.).....Lt. Comdr., U.S.N.R.



**Monona County**

†Harlan, M. E., Onawa (Fleet PO, San Francisco, Cal.) .....Lt. (jg), U.S.N.R.  
Wainwright, M. T., Mapleton (Giltner, Nebr.).....Capt., A.U.S.

**Monroe County**

Bay, F. N., Albion.....Lt. Comdr., U.S.N.R.  
Gilliland, C. H., Albion (Fleet PO, San Francisco, Cal.) .....Lt. Comdr., U.S.N.  
Smith, R. A., Albion (New Cumberland, Pa.).....Capt., A.U.S.

**Montgomery County**

Panzer, E. J. C., Stanton (Point Montara, Cal.).....Lt., U.S.N.R.  
Rost, G. S., Red Oak (Halstead, Kan.).....Capt., A.U.S.  
Sorensen, E. M., Red Oak (Jefferson Barracks, Mo.).....Capt., A.U.S.

**Muscatine County**

Asthalter, R. W., Muscatine (Fort Meade, Md.).....1st Lt., A.U.S.  
Goad, R. R., Muscatine (Washington, D. C.).....Comdr., U.S.N.R.  
Kimball, J. E., Jr., West Liberty (Sioux City, Iowa).....Major, A.U.S.  
Norem, Walter, Muscatine (APO, Miami, Fla.).....Capt., A.U.S.  
Robertson, T. A., West Liberty (APO 119, New York, N. Y.) .....Capt., A.U.S.

**O'Brien County**

Getty, E. B., Primghar (APO 872, New York, N. Y.) .....Major, A.U.S.

**Osceola County**

Kuntz, G. S., Sibley (APO 34, New York, N. Y.).....Capt., A.U.S.

**Page County**

Bauer, Frank, Shenandoah (APO New York, N. Y.).....A.U.S.  
Blackman, Nathan, Clarinda (Ft. Benj. Harrison, Ind.) .....Major, A.U.S.  
Brush, Frederick, Shenandoah (APO New York, N. Y.).....A.U.S.  
Burdick, F. D., Shenandoah (Denver, Colo.).....Capt., A.U.S.  
Burnett, J. K., Clarinda (Cheyenne, Wyo.).....Major, A.U.S.  
Rausch, G. R., Clarinda (Sioux City, Iowa).....Capt., A.U.S.  
Savage, L. W., Shenandoah (Fort Meade, Md.).....1st Lt., A.U.S.  
Schwiddle, Tilford, Shenandoah (APO New York, N. Y.).....A.U.S.

**Plymouth County**

Bowers, C. V., LeMars (APO New York, N. Y.).....1st Lt., A.U.S.  
Fisch, R. J., LeMars (Denver, Colo.).....Capt., A.U.S.  
Foss, R. H., Remsen (Homestead, Fla.).....Capt., A.U.S.  
Wolfson, Harold, Kingsley (APO San Francisco, Cal.) .....Lt. Col., A.U.S.

**Pocahontas County**

Blair, F. L., Jr., Fonda.....Lt., U.S.N.R.  
Larson, J. B., Laurens (APO 720, San Francisco, Cal.) .....Capt., A.U.S.  
Patterson, A. W., Fonda (Des Moines, Iowa).....Capt., A.U.S.

**Polk County**

Angell, C. A., Des Moines.....Capt., A.U.S.  
Barner, J. L., Des Moines (Atlanta, Ga.).....Major, A.U.S.  
Bender, H. R., Des Moines (Carlisle Barracks, Penn.) .....1st Lt., A.U.S.  
Bond, T. A., Des Moines (Great Lakes, Ill.).....Lt. Comdr., U.S.N.R.  
Bruner, J. M., Des Moines (El Paso, Texas).....Lt. Col., A.U.S.  
Bruns, P. D., Des Moines (Carlisle Barracks, Penn.) .....1st Lt., A.U.S.  
Connell, J. R., Des Moines.....Major, A.U.S.  
Corn, H. H., Des Moines (APO 9281, San Francisco, Cal.) .....Capt., A.U.S.  
Downing, A. H., Des Moines (Clinton, Iowa).....Capt., A.U.S.  
Ervin, L. J., Des Moines.....Lt. Col., A.U.S.  
Fleck, W. L., Des Moines (Ft. Howard, Md.).....Lt. Col., A.U.S.  
Fried, David, Des Moines (Carlisle Barracks, Penn.) .....1st Lt., A.U.S.  
Fracasse, John, Des Moines.....1st Lt., A.U.S.  
Gerchek, E. W., Des Moines.....Capt., A.U.S.  
Glomset, D. A., Des Moines (Clinton, Iowa).....Capt., A.U.S.  
Graeber, F. O., Des Moines.....Lt., U.S.N.R.  
Harris, H. L., Des Moines (Salina, Kan.).....1st Lt., A.U.S.  
Kirch, W. A. W., Des Moines (Astoria, Ore.).....Lt. Comdr., U.S.N.R.  
Landis, S. N., Des Moines (West Palm Beach, Fla.) .....1st Lt., A.U.S.  
La Tona, Salvatore, Des Moines.....1st Lt., A.U.S.  
Lederman, James, Des Moines.....1st Lt., R.C.A.  
Losh, C. W., Jr., Des Moines.....Capt., A.U.S.  
Maloney, P. J., Des Moines (Fort Lewis, Wash.).....1st Lt., A.U.S.  
Martin, L. E., Des Moines (Helena, Ark.).....1st Lt., A.U.S.  
Matheson, J. H., Des Moines (San Francisco, Cal.) .....Lt. Comdr., U.S.N.R.  
McCoy, H. J., Des Moines.....Capt., U.S.N.R.  
McDonald, D. J., Des Moines.....Major, A.U.S.  
Mencher, E. W., Des Moines.....1st Lt., A.U.S.  
Montgomery, S. A., Des Moines (Carlisle Barracks, Pa.) .....Capt., A.U.S.  
†Morden, R. P., Des Moines (APO 635, New York, N. Y.) .....Capt., A.U.S.  
Mumma, C. S., Des Moines (Los Angeles, Cal.).....Major, A.U.S.  
Nelson, A. L., Des Moines (Ft. Sill, Okla.).....Major, A.U.S.  
Noun, L. J., Des Moines.....Lt. Comdr., U.S.N.R.  
Nourse, M. H., Des Moines (Fleet PO, New York, N. Y.) .....Lt., U.S.N.  
Overton, L. M., Des Moines (Fleet PO, San Francisco, Cal.) .....Lt. Comdr., U.S.N.R.

Patton, B. W., Des Moines (Camp Robinson, Ark.) .....1st Lt., A.U.S.  
Schlaser, V. L., Des Moines (Portsmouth, Va.) .....Lt. Comdr., U.S.N.  
Singer, P. L., Des Moines (Camp Grant, Ill.).....1st Lt., A.U.S.  
Skultety, J. A., Des Moines (Fleet PO, San Francisco, Cal.) .....P. A. Surg., U.S.P.H.S.  
\*Snodgrass, R. W., Des Moines (APO 9528, New York, N. Y.) .....Capt., A.U.S.  
Sorensen, R. M., Des Moines (Topeka, Kan.).....Lt. Col., U.S.P.H.S.  
Stitt, P. L., Des Moines (Seattle, Wash.).....Lt. (jg), U.S.N.R.  
Turner, H. V., Des Moines (San Antonio, Texas).....Capt., A.U.S.  
Updegraff, Thomas, Des Moines (APO San Francisco, Cal.) .....Capt., A.U.S.  
Van Hale, L. A., Des Moines (Denver, Colo.).....Major, A.U.S.  
Wagner, E. C., Des Moines (APO 1009, San Francisco, Cal.) .....Capt., A.U.S.

**Pottawattamie County**

Kurth, C. J., Council Bluffs (Camp Crowder, Mo.).....Major, A.U.S.  
Mathiasen, H. W., Neola (Alexandria, La.).....Capt., A.U.S.  
Mathiasen, J. W., Council Bluffs (Salt Lake City, Utah) .....Capt., A.U.S.  
Wieseler, R. J., Avoca (McChord Field, Wash.).....A.U.S.  
Wurl, O. A., Council Bluffs (Ft. Sam Houston, Texas) .....Lt. Col., A.U.S.

**Ringgold County**

Seaman, C. L., Mount Ayr (Fort Smith, Ark.).....Major, A.U.S.

**Sac County**

Bassett, G. H., Sac City (Mobile, Ala.).....Lt. Comdr., U.S.N.R.

**Scott County**

†Baker, R. W., Davenport (APO 511, New York, N. Y.) .....Capt., A.U.S.  
Boyer, U. S., Davenport (Rock Island, Ill.).....Lt. Col., A.U.S.  
Carey, E. T., Davenport.....1st Lt., A.U.S.  
Coleman, Tom, Davenport (APO 230, New York, N. Y.) .....Capt., A.U.S.  
Cummins, G. M., Jr., Davenport (Fort Custer, Mich.) .....Capt., A.U.S.  
Evans, H. J., Davenport (Daytona Beach, Fla.).....Capt., A.U.S.  
Gibson, P. E., Davenport (Palm Springs, Cal.).....Major, A.U.S.  
Hurevitz, H. M., Davenport (Brooklyn, N. Y.).....Major, A.U.S.  
Hurteau, Everett, Davenport (APO 647, New York, N. Y.) .....Capt., A.U.S.  
Hurteau, W. W., Davenport (Camp Berkeley, Texas) .....Major, A.U.S.  
Krakauer, Max, Davenport (APO 102, New York, N. Y.) .....Major, A.U.S.  
Kuhl, A. B., Jr., Davenport (Ft. Meade, Md.).....1st Lt., A.U.S.  
Perkins, R. M., Davenport (APO 121B, New York, N. Y.) .....Capt., A.U.S.  
Rendleman, Hugh, Davenport (Fleet PO, San Francisco, Cal.) .....Lt. (jg), U.S.N.R.  
Sheeler, I. H., Davenport (APO 350, New York, N. Y.) .....Capt., A.U.S.

**Shelby County**

Bisgard, C. V., Harlan (Fleet PO, San Francisco, Cal.) .....Comdr., U.S.N.R.  
McGowan, J. P., Harlan (La Jolla, Cal.).....Comdr., U.S.N.R.

**Sioux County**

Gleysteen, R. R., Alton (Oceanside, Cal.).....Comdr., U.S.N.  
Oelrich, C. D., Sioux Center (Buckley Field, Colo.).....Capt., A.U.S.

**Tama County**

Standefer, J. M., Tama (Great Lakes, Ill.).....Lt., U.S.N.R.

**Wapello County**

Brentan, Emanuel, Ottumwa (Camp Carson, Colo.).....Capt., A.U.S.  
Gilfillan, C. D. N., Eldon (Battle Creek, Mich.).....Capt., A.U.S.  
Howell, H. P., Ottumwa (San Rafael, Cal.).....Major, A.U.S.  
Selman, R. J., Ottumwa (El Paso, Texas).....Col., A.U.S.  
Struble, G. C., Ottumwa (Cleveland, Ohio).....Lt. Col., A.U.S.

**Warren County**

Hoffman, G. R., Lacona (Camp San Luis Obispo, Cal.) .....Capt., A.U.S.

**Washington County**

Boice, C. L., Washington (Oakland, Cal.).....Lt. Comdr., U.S.N.  
Droz, A. K., Washington (Fleet PO, San Francisco, Cal.) .....Comdr., U.S.N.R.  
Stutaman, R. E., Washington (Patuxent River, Md.) .....Lt., U.S.N.R.

**Webster County**

Burleson, M. W., Fort Dodge (Pasadena, Cal.).....Capt., A.U.S.  
Joyner, N. M., Fort Dodge (Columbus, Ohio).....A.U.S.  
†Thatcher, O. D., Fort Dodge (APO 634, New York, N. Y.) .....Capt., A.U.S.  
Van Patten, E. M., Ft. Dodge (Colorado Springs, Colo.) .....Capt., A.U.S.

**Woodbury County**

Bettler, P. L., Sioux City (APO 235, San Francisco, Cal.) .....Lt. Col., A.U.S.  
 Boe, Henry, Sioux City (Fort Snelling, Minn.).....Capt., A.U.S.  
 Cowan, J. A., Sioux City (Oklahoma City, Okla.) .....Major, U.S.P.H.S.  
 Crowder, R. E., Sioux City (Kansas City, Mo.) .....Lt. Comdr., U.S.N.R.  
 Dimsdale, L. J., Sioux City (Clinton, Iowa).....Capt., A.U.S.  
 Graham, J. W., Sioux City (Pensacola, Fla.) Lt. Comdr., U.S.N.R.  
 Grossman, M. D., Sioux City (APO 33, San Francisco, Cal.) .....Capt., A.U.S.  
 Harris, D. M., Sioux City.....Capt., A.U.S.  
 Heffernan, C. E., Sioux City (APO 336, San Francisco, Cal.) .....Capt., A.U.S.  
 Hicks, W. K., Sioux City (Spokane, Wash.).....Major, A.U.S.  
 Knott, P. D., Sioux City.....Capt., A.U.S.  
 Krigten, W. M., Sioux City.....Lt. Col., A.U.S.  
 Lande, J. N., Sioux City (APO 63, New York, N. Y.) Major, A.U.S.  
 Reeder, J. E., Jr., Sioux City (Camp Carson, Colo.) Major, A.U.S.  
 Ryan, M. J., Sioux City (Topeka, Kan.).....Major, A.U.S.  
 Schwartz, J. W., Sioux City (APO 816, New York, N. Y.) .....Lt. Col., A.U.S.  
 Simonsen, Marie N., Sioux City (Philadelphia, Pa.) Lt., U.S.N.R.  
 Tracy, J. S., Sioux City.....Major, A.U.S.

**Wright County**

Bird, R. G., Clarion (Asbury Park, N. J.)..Lt. Comdr., U.S.N.R.  
 Doles, E. A., Clarion (Spokane, Wash.).....Capt., A.U.S.

(\*) Reported missing in action.

(†) Reported deceased in service.

(‡) Reported prisoner of war.

## ANNUAL CONFERENCE OF SECRETARIES AND EDITORS

(Continued from page 111)

He stressed what had been done in both fields and what was contemplated.

Mr. John Hunton of San Francisco discussed the paper, and he brought out two interesting activities of California physicians. In Los Angeles County, an indoctrination course is being given to every member applying for membership. This course includes medical ethics, organization history, malpractice, legislation, and prepayment plans. The purpose is to teach the doctors they have a responsibility as members to handle themselves properly with the public. The medical schools in California are also including a course of this type.

Mr. Edward Stegen also discussed the same paper from the viewpoint of the science of public relations.

Mr. Jay Ketchum of Michigan told what progress had been made toward a national medical prepayment plan, stressing the imperative need for state work along this line. He said states should not wait for the national plan, but should go ahead with plans for their own community. He told what the advisory committee had already done, and this was discussed by Dr. A. W. Adson of Minnesota. Dr. Adson felt we must proceed cautiously but not necessarily slowly, and he brought out three possible methods of meeting the situation.

The conference possibly did not offer much that was new to those participating, but it did bring up to date the status of the many subjects discussed, and provided a summary which will be helpful.

## POSTGRADUATE COURSE IN DISEASES OF THE CHEST

A Postgraduate Course in Diseases of the Chest will be given under the auspices of the Illinois Chapter of the American College of Chest Physicians at Michael Reese Hospital, Chicago, Illinois, during the week April 1 to 6, inclusive. Doctors may elect to follow this week's formal course with practical instruction in the fields of thoracic surgery, bronchoscopy, pneumothorax, bronchography, and other methods and technics in the diagnosis and treatment of pulmonary disease.

Further information may be secured at the office of the American College of Chest Physicians, 500 North Dearborn Street, Chicago 10, Illinois.

## INVITATION TO PARTICIPATE IN EXHIBITS AT INDUSTRIAL HEALTH CONFERENCE

Members of the state medical society, the hospitals and medical education institutions in Iowa are invited to participate in the presentation of exhibits during the Industrial Health Conference to be held in Chicago at the Sherman Hotel April 8 to 13, inclusive.

This conference, which is sponsored jointly by the American Association of Industrial Physicians and Surgeons, The American Industrial Hygienists Association, The Association of Governmental Industrial Hygienists, The American Association of Industrial Dentists, and the American Association of Industrial Nurses, will be the outstanding conference of this type ever held. The Scientific Exhibit Program is somewhat competitive in that award plaques for first, second, and third prizes will be awarded.

Those interested in preparing an exhibit related in any way to industrial health or hygiene should communicate with H. Glenn Gardiner, M.D., Chairman of the Committee for Medical Motion Pictures, Scientific Exhibits and Scientific Awards of the American Association of Industrial Physicians and Surgeons, 28 East Jackson Boulevard, Chicago 4, Illinois.

## UROLOGY AWARD

The American Urological Association offers an annual award "not to exceed \$500" for an essay (or essays) on the result of some specific clinical or laboratory research in Urology. The amount of the prize is based on the merits of the work presented, and if the Committee on Scientific Research deems none of the offerings worthy, no award will be made. Competitors shall be limited to residents in urology in recognized hospitals and to urologists who have been in such specific practice for not more than five years. All interested should write the Secretary for full particulars.

The selected essay (or essays) will appear on the program of the forthcoming meeting of the American Urological Association, to be held at the Netherland Plaza, Cincinnati, Ohio, July 22 to 25, 1946.

Essays must be in the hands of the Secretary, Dr. Thomas D. Moore, 899 Madison Avenue, Memphis, Tennessee, on or before July 1, 1946.



# WOMAN'S AUXILIARY NEWS

MRS. KEITH M. CHAPLER, *Chairman of Press and Publicity Committee*, Dexter, Iowa

*President*—MRS. SOREN S. WESTLY, Manly

*President-Elect*—MRS. MARION H. BRINKER, Jefferson

*Secretary*—MRS. KEITH M. CHAPLER, Dexter

*Treasurer*—MRS. HARRY W. DAHL, Des Moines

## REPORT OF DECEMBER CONFERENCE

The second conference of presidents and presidents-elect was held in Chicago at the Knickerbocker Hotel December 5 and 6, 1945.

On December 5 at 9:45 a. m. the conference was called to order, followed by a pledge of loyalty, roll call, and introductions. Mrs. Roscoe E. Mosiman of Seattle, Washington, was again elected conference chairman. Greetings were extended by Dr. Malcolm T. MacEachern, president-elect of the Chicago Medical Society.

A welcome was presented by the president of the Woman's Auxiliary to the American Medical Association, Mrs. David W. Thomas, who expressed her appreciation of the large number in attendance. There were more than twice as many in attendance as the preceding year, occasioned by the fact that many of the wives accompanied their doctor husbands attending the meeting of the House of Delegates of the American Medical Association.

Both your president and president-elect, Mrs. M. H. Brinker, were present to represent Iowa. The reports from the various states were very encouraging. It was interesting to meet so many physicians' wives and discuss topics pertaining to the work carried on in our Auxiliaries. With so many of the physicians returning from the Army and Navy to peacetime practice, the slogan of all state presidents should be "Every Physician's Wife an Auxiliary Member."

A recess was called and Dr. Joseph S. Lawrence, Director of the Washington Office of the Council on Medical Service and Public Relations, spoke on the Wagner-Murray-Dingell bill, the Pepper bill, and the Hill-Burton hospital construction bill. He asked the Auxiliary members to discuss this pending legislation in all organizations to which they belong and in that way many people would be enlightened.

Dr. Louis H. Bauer spoke on socialized medicine, stressing the great expense it would be to the nation without being a real benefit to anyone.

Of interest to all those in attendance was the following resolution, which had been passed by the House of Delegates of the American Medical Association on December 5:

*Whereas*, The object of the Woman's Auxiliary is to aid the American Medical Association in every way possible; and

*Whereas*, The most urgent need at the present time is for widespread dissemination of knowledge con-

cerning the hazards of current medical legislation; therefore be it

*Resolved*, That the House of Delegates of the American Medical Association requests the Woman's Auxiliary to use every avenue possible to bring such information to its members and through them to the public.

Every member was urged to subscribe to *Hygeia* and *The Bulletin*.

Mrs. S. S. Westly, President

NOTE: Mrs. David W. Thomas of Lock Haven, Pennsylvania, national president, has accepted the invitation of the Woman's Auxiliary to the Iowa State Medical Society to be present for its annual meeting April 17 and 18 in Des Moines. She will be the guest speaker. See page 90 of this issue for the complete program of this meeting.

## Dallas-Guthrie Society

The Woman's Auxiliary to the Dallas-Guthrie Medical Society met with the doctors for its regular mid-winter meeting, Thursday, January 17, in Adel. After a joint luncheon with the Adel Rotarians and the Dallas-Guthrie doctors, the Auxiliary members held their business meeting in the Adel Library, with twelve members and one guest present.

Mrs. Keith M. Chapler of Dexter, president, conducted the business meeting and welcomed back into membership Mrs. George McMahon of Wauke, and two wives of returned servicemen, Mrs. F. A. Wilke of Perry and Mrs. D. W. Todd of Guthrie Center.

Reports of the various committees were given, and the new president for 1946, Mrs. E. J. Butterfield of Dallas Center, took the Chair. She presented her plans for the coming year, stressing the promotion of *Hygeia* and the welcoming home of our service physicians and their wives. Mrs. C. A. Nicoll of Pandora was elected delegate to the state meeting in April, and Mrs. Charles Porter of Redfield was named alternate. Chairmen of the various committees were appointed. Those present stood in silent tribute to the memory of Mrs. Channing Smith, deceased, one-time member of the Dallas-Guthrie Auxiliary.

The highlight of the meeting was a review of the book by Perry Burgess, *Who Walk Alone*, given by Mrs. Chapler. This story of the life of a victim of leprosy was so vividly given that each member present felt it was a drama being enacted before her very eyes.

### POLK COUNTY

The Woman's Auxiliary to the Polk County Medical Society held its annual meeting in Des Moines Friday afternoon, January 18. The following officers were elected for the coming year: Mrs. Floyd A. Springer, president-elect; Mrs. James E. Dyson, vice president; Mrs. Burlin E. Keen, secretary, and Mrs. Noble W. Irying, treasurer. Mrs. George H. Watters assumed the office of president, succeeding Mrs. Russell C. Doolittle.

### CORRECTION

Mrs. E. J. Butterfield of Dallas Center is State *Hygeia* Chairman.

### EVERY PHYSICIAN SHOULD HAVE TWO COPIES OF HYGEIA, DR. KRETSCHMER BELIEVES

#### Knowledge Gained Through Health Magazine Is Beneficial to Patients

"... This is the 22nd annual meeting of the Woman's Auxiliary to the American Medical Association. From a modest beginning of 440 members, it is most gratifying to those of us who are interested in the Auxiliary to know that today you can boast of 25,000 members.

"One of your most outstanding contributions has been your wholehearted support and promotion of *Hygeia*. I am greatly impressed by the fact that in some schools *Hygeia* is used, not only for collateral reading but as a text for instruction in matters of health.

"You will all agree with me, I am sure, that *Hygeia* is the best health magazine published and that the physicians of this country can be proud of this publication. Unfortunately, many physicians are not impressed with the value of *Hygeia* and the important role it plays in health education. Some of the physicians object because they believe it teaches the public too much in matters of health or that it may encourage a tendency toward self medication. I do not agree with this point of view at all. I have always found that the more a patient knows about his ailment, the easier it is to recommend the proper form of treatment. I believe that it will be necessary to do further work among the physicians themselves. Surely, if we do not have the wholehearted support of the medical profession, it will be difficult to interest the laity. Not only do I believe that every physician should support *Hygeia* and its activities but I have always taken the position that each practicing physician should subscribe to two issues of *Hygeia*, one for his office and one for his home. My office copies of *Hygeia* are never old and dogeared because my patients carry *Hygeia* away to finish at home some article that interested them.

"Another relatively simple and easy way for the physician to promote *Hygeia* is to present yearly subscriptions as Christmas presents to patients, friends, and relatives, especially to those who have

children. I have done so for many years. My reason for doing this has been to educate these young mothers in the care of their children and in health problems, so as to interest them in the magazine and to familiarize them with its many advantages. It has been very interesting to have some of these young mothers tell me that they do not keep *Hygeia* when they have finished with it but they give their copies to friends, neighbors, and clubs so the readers are more numerous than the subscription list would lead us to believe.

"Having once enrolled these people on the subscription list, it is easy for the circulation department of *Hygeia* to follow up and obtain results. If physicians can present to their patients and friends a year's subscription to *Hygeia* as a Christmas present, the subscription department of *Hygeia* will have just that many more potential renewals on which they may concentrate their efforts to increase the number of subscribers.

"As many of you know, Mrs. Kretschmer was a very ardent worker in the Woman's Auxiliary. In her memory I would like to present you with a contribution. I have already discussed this with your president, Mrs. Cary. We believe a plaque duly inscribed with the names of the winners of the annual *Hygeia* contest would be a suitable memorial.

"I know of no better group than the Woman's Auxiliary to acquaint the public with the aims, the ideals, and the work of the American Medical Association."

*From an address before the Woman's Auxiliary by Herman L. Kretschmer, M.D., President, American Medical Association, Chicago, June 14, 1944. Reprinted from Hygeia Handbook, 1945-46.*

### SPEAKERS BUREAU RADIO SCHEDULE

WOI—Wednesdays at 2:45 p. m.

WSUI—Thursdays at 9:30 a. m.

March 6-7 Still the Greatest Mother

American Red Cross  
Public Information Service

March 13-14 Smallpox and Diphtheria

Joseph B. Thornell, M.D.

March 20-21 Scarlet Fever and Whooping Cough

Harold J. Richter, M.D.

March 27-28 Measles and Mumps

Richard E. H. Phelps, M.D.

### Seventeenth Annual Meeting WOMAN'S AUXILIARY to the

Iowa State Medical Society

April 17 and 18, 1946

Hotel Kirkwood  
Des Moines, Iowa



# HISTORY OF MEDICINE IN IOWA

*Edited by the Historical Committee*

DR. WALTER L. BIERRING, Des Moines, Chairman

DR. HENRY G. LANGWORTHY, Dubuque, *Secretary* DR. CHARLES L. JONES, Gilmore City

DR. CLYDE A. HENRY, Farson

DR. LESTER C. KERN, Waverly

## Medical History of Wapello County

CLYDE A. HENRY, M.D., Farson

(Continued from last month)

### PRESENT MEMBERSHIP OF WAPELLO COUNTY MEDICAL SOCIETY

*Dr. Edwin G. Barton*, the son of a Methodist minister, was born August 6, 1874. He attended the Chicago Homeopathic Medical College, from which he received the degree of Doctor of Medicine in June, 1900. Soon after graduation he came to Ottumwa, Iowa, and established a practice which has broadened with the years. He is a member of the Wapello County and Iowa State Medical Societies. He married Martha Ware, February 17, 1901. They have two sons, one of whom is a practicing physician in Illinois.

*Dr. Arthur L. Blome* was born in Cumberland, Iowa, March 22, 1907, the son of George D. and Martha (Caldwell) Blome. He received his early education in the public schools at Madrid, Iowa. In 1928 he received his B.S. degree from the State University of Iowa, and in 1930 his M.D. degree from the Medical Department of the same institution. He interned at the San Diego County General Hospital, San Diego, California, after which he served a senior internship in obstetrics and gynecology at the University Hospitals in Iowa City. He was a member of the Student Health Staff at the State University of Iowa from 1932 to 1943. He came to Ottumwa in 1943, since which he has been engaged in general practice with special reference to obstetrics. He married Josephine McCarty of Ottumwa February 9, 1929, and has two children.

*Dr. Clyde A. Henry* was born August 9, 1873, on a farm in Keokuk County, Iowa, the son of Fayette M. and Lucinda (Lamb) Henry, and grandson (fifth generation) of the old Virginian, Patrick Henry. His father was born in Wells County, Indiana, June 10, 1851, and moved with his family to Wapello County, Iowa, when he was five years old. His mother, of Kentucky

parentage, was born in Wapello County, May 25, 1855.

Dr. Henry attended the rural schools at Competine (now Farson) and grade school in Ottumwa; he taught ten terms of district school, during which time he read medicine under the direction of Dr. P. Sherlock, Martinsburg, Iowa; he entered the Keokuk Medical College at Keokuk, Iowa, in 1894, from which he received the M.D. degree in 1897. Immediately following graduation he established an office in Competine, and has continued in active practice in that community since. He is a member of the Wapello County and the Iowa State Medical Societies, a Fellow of the American Medical Association, and a member of the Des Moines Valley and Mississippi Valley Medical Societies. He is also a staff member of St. Joseph Hospital, Ottumwa, and has represented the Wapello County Medical Society in the Iowa House of Delegates since 1939. He is an Oddfellow, a Rebekah, an A.M.O.S., and an Elk. He married Grace E. Sylvester of Competine, Iowa, February 25, 1903. They have no children.

*Dr. Edward B. Hoeven* was born in George, Iowa, January 16, 1893, the son of John and Maggie Hoeven. He completed his early education at Hospers, Iowa, and was graduated in 1912 from Northwestern Classical Academy at Orange City, Iowa, and from Hope College, Michigan, in 1916. The following year he entered Western Reserve University School of Medicine, graduating with the degree of M.D. in 1920. He served the following internships: Department of Surgery, St. Vincent Charity Hospital, Cleveland, Ohio, 1920-21; Resident Surgeon, St. Vincent Charity Hospital, 1921-1923. He entered practice in 1923 at

Cedar Rapids, Iowa. In 1924 he moved to Sigourney, Iowa, and remained in practice there five years, moving to Ottumwa, Iowa, in 1929. He is an active member of the staffs of St. Joseph and Ottumwa Hospitals, a member of the Wapello County and Iowa State Medical Societies, the American Medical Association, and the Iowa Clinical Surgical Society.

He married Valerie Opal Johnson, November 17, 1934.

*Dr. Elias Burton Howell* was born in Johnson County, Iowa, August 2, 1884. He graduated from the public schools of Iowa City in 1902, and from the Medical Department of the State University of Iowa in 1907. During the years 1905 to 1907 he served as undergraduate assistant in the department of obstetrics and gynecology, and as graduate assistant in the same department in 1908.

He came to Ottumwa November 14, 1909, and has continued in practice there since, having limited his practice during the last twenty years to general surgery and consultations.

Dr. Howell is an active staff member of the St. Joseph and Ottumwa Hospitals. He is a member of the Wapello County Medical Society, the Iowa State Medical Society, the Mississippi Valley Medical Society, the American College of Surgeons, and the American Medical Association. He not only has been active in the affairs of the Wapello County Medical Society, but has contributed valuable services to other societies as well. He was third vice president of the Iowa State Medical Society in 1918, and is the present secretary of the Des Moines Valley Medical Society. On September 23, 1909, he married Miss Bertha Hemsworth of Cedar Falls, Iowa. They have two children—a son, Major Homer Preston Howell, M.C., A.U.S., and a daughter, Mrs. Helen L. Furry.

*Dr. Glenn Raymond Johnson* was born in Chariton, Iowa, February 26, 1897. His father, Eric M. Johnson, born in Sweden, came to this country early in life and became a building contractor. His mother was born in Iowa, and his mother's mother was a homeopathic physician. After graduating from the Chariton High School, he spent two years at Augustana College, Rock Island, Illinois, and served in World War I as a private in the 91st Texas Division, 1917-18. At the close of the war he entered the State University of Iowa, graduating with the degree of B.A. in 1921 and M.D. in 1926; he interned at Iowa Lutheran Hospital, Des Moines, 1926-28, and practiced with Dr. J. T. Strawn of Des Moines from 1928 to 1932, when he came to Ottumwa.

Dr. Johnson is a member of the Wapello County, the Iowa State, and Mississippi Valley Medical

Societies and the American Medical Association. He is also a member of the American College of Chest Physicians, a staff member of the Ottumwa and St. Joseph Hospitals, and has been the medical director of Sunnyslope Sanatorium, Ottumwa, Iowa, since 1932. He married Jewell Russell, a native Georgian and a graduate of the Georgia State College and Emory University, in Atlanta in April, 1932. Before marriage, Mrs. Johnson served as dietitian at the Faye Hospital, Washington, D. C., Veterans Hospital, Knoxville, Iowa, and the Hines Veterans Hospital, Maywood, Illinois. They have two children, Nancy 10, and Raymond 7.

*Dr. Justus B. Roberts* was born July 9, 1909, in Brimfield, Illinois, where he received his early education. He was graduated in June, 1934, from the University of Rochester School of Medicine, Rochester, New York. He maintains an office at 211 East Second Street, Ottumwa, Iowa, and restricts his practice to pediatrics. He is a member of the Wapello County and Iowa State Medical Societies, and a staff member of the St. Joseph and Ottumwa Hospitals. He married Helen Hayes on August 28, 1937. They have no children.

*Dr. Frank W. Mills* was born at Iowa Center, Iowa, December 18, 1868, the son of E. C. and Levantia (Guy) Mills. He received his early education in the district schools of Story County, Iowa, and then attended the Iowa State College at Ames. Dr. Mills, like most medical students of the 1880-90 period, taught school to earn money with which to pay the cost of a medical education. He taught school successively in Iowa, Nebraska, and Colorado; and yet ended his teaching career at the early age of twenty-one. Having completed the required study course under a preceptor, he entered the University of Illinois College of Medicine, Chicago, Illinois, from which he received the M.D. degree in 1893. He located in Ottumwa the same year, and after more than fifty-two years is still actively engaged in the practice of medicine. He is a member of the Des Moines Valley Medical Society, a life member of the Wapello County and Iowa State Medical Societies, and a member of the Fifty Year Club.

Dr. Mills has participated in many public health problems in his community. He also served four years as County Coroner, and for the past six years has been a member of the Insanity Commission.

In 1892, he married Dr. Margaret Billingsley, a successful Ottumwa physician for many years. She died in 1934. In 1938, he married Mary Pabst. He has no children.

*Dr. Jesse C. Moore*, the son of John R. and



Mary (Hodson) Moore, was born on a farm near Eldon, Iowa, March 6, 1878. After graduation from the Eldon High School, he taught school four years and studied medicine at the Keokuk Medical College, College of Physicians and Surgeons, Keokuk, Iowa, from which he received the M.D. degree in 1905. He practiced medicine ten years in Clio, Iowa, moving to Eldon, Iowa, in 1915. He is a member of the Wapello County and Iowa State Medical Societies. He married Effie Brock of Scott City, Kansas, November 22, 1911. They have one son.

*Dr. Vernon Sawyers Downs* was born November 15, 1897, and received the Doctor of Medicine degree from the State University of Iowa College of Medicine in 1927. He is a member of the Wapello County and Iowa State Medical Societies, and an active member of the staffs of the St. Joseph and Ottumwa Hospitals. He married Lillian Greer, June 6, 1927. They have two daughters.

*Dr. Edwin A. Nash* was born at Harwich, Ontario, Canada, January 16, 1875, the son of Joseph and Elizabeth (McCall) Nash. He received his early education at Harwich and Ridgetown, Ontario, taught school in Minnesota, and received the M.D. degree in 1904 from the Keokuk Medical College, College of Physicians and Surgeons, Keokuk, Iowa. He practiced medicine at Peterson, Troy Mills, Lone Tree, Greeley, and Dike, Iowa, before coming to Ottumwa. He is a member of the Wapello County and Iowa State Medical Societies, a staff member of the Ottumwa and St. Joseph Hospitals, an Oddfellow, a Mason, and a member of the K. of P. and Eastern Star. Dr. Nash has the distinction of being the first physician in Iowa to publish an illustrated book devoted exclusively to original poetry. He married Paura A. Means February 28, 1900. They have three daughters and one son.

*Dr. Frederick L. Nelson* was born December 19, 1877, in Douds, Iowa. After completing his early education, he taught school and studied at Iowa State Teachers College and the State University of Iowa, receiving the B.S. degree in 1900 and the M.D. degree from the Bellevue Hospital Medical College, in 1903. He interned at Hackensack General Hospital in 1903-04, was associated with the Demilt Clinic as attending surgeon, 1904-05, was instructor in the Department of Surgery at Fordham University Medical School, 1910-17, became associate surgeon at Lincoln Hospital, New York, 1915-18, and served a residency in surgery at Bellevue Hospital, 1917-18. He enlisted in 1918 as a Captain in World War I, later being advanced to the rank of Major, and in 1931 he was promoted to the rank of Lieutenant Colonel,

U. S. Army Reserve Corps, serving as Commanding Officer, No. 347, Medical Regiment, Camp Robinson, and as Consulting Specialist at Ft. Benning, Georgia, in 1940. He came to Ottumwa in 1919 and has since been engaged in the practice of medicine and surgery. He is a member of the staffs of the St. Joseph and Ottumwa Hospitals, and consulting surgeon at the Sunnyslope Sanatorium. He is a member of the county, state, and national medical associations, and was a former member of the North American Radiological Society. Although it was more or less in general use in locating objects, in 1903 Dr. Nelson was given credit through records submitted by the hospital to the American Medical Association and the Surgeon General's Office, Washington, D. C., as being the first to operate under the fluoroscope at the Hackensack General Hospital. For this service, he was awarded, in 1931, by the secretary to John D. Rockefeller, Sr., one of that old gentleman's famous dimes.

In addition to having attended most of the large clinical centers of the United States, Dr. Nelson took postgraduate work in Europe in 1925, 1927, and 1937.

Dr. Nelson married Lorena Ingrahm, a former superintendent at the Ottumwa Hospital, June 28, 1922. They have two sons, Edward J. and Dr. Frederick L. Nelson, Jr., who has recently returned to Ottumwa to engage in the practice of surgery.

*Dr. William C. Newell* was born February 9, 1876, in Chillicothe, Iowa, where his parents, Isaac Newton and Dove Newell, natives of Ohio, settled at an early date. He received his early education in the rural schools. He graduated from the Kirkville High School and received his premedical education at the State University of Iowa. He was graduated in 1899 from Marion-Sims College of Medicine in St. Louis and in 1900 from Barnes Medical College. He then returned to Kirkville and practiced medicine there a short time. That same year he moved to Ottumwa, where he was in continuous practice, except for a period of overseas service in World War I, until his death occurred January 18, 1946. Following World War I, he devoted most of his time to surgery and consultations. He was a member of the Wapello County, Iowa State, and Des Moines Valley Medical Societies, the Medico-Chirurgical Society of St. Louis, Veteran Surgeons of Iowa, and the American Medical Association. He was an active member of the staffs of the St. Joseph and Ottumwa Hospitals, and for many years lectured on anatomy and physiology to student nurses of those institutions. He married Pearl A. Mothershead in 1919. Mrs. Newell was formerly su-

perintendent of the Ottumwa Hospital, has been actively associated with Sunnyslope Sanatorium, serving as President of the Board for a number of years, and is active in Red Cross work, having graduated 165 Nurses Aides during World War II. They had no children.

*Dr. David T. Rambo* was born in Van Buren County, Iowa, October 8, 1873, where he received his early education. He attended the Keokuk Medical College, College of Physicians and Surgeons, Keokuk, Iowa, receiving the degree of Doctor of Medicine in 1897. He practiced medicine several years in Chillicothe, Iowa, before moving to Ottumwa. He is a member of the Wapello County and Iowa State Medical Societies, and a member of the staffs of St. Joseph and Ottumwa Hospitals. He was married September 17, 1896, and has one daughter.

*Dr. David Leo Rater* was born on a farm near Ottumwa, April 11, 1897. His parents, David Albert and Honorah Mary Rater, were also natives of Wapello County.

He received his early education in a rural school near his father's farm, graduating from the Ottumwa High School in 1917. After that he attended Creighton University in Omaha, Nebraska, receiving his B.S. degree in 1921 and the M.D. degree from the same institution in 1923. Following his graduation, he entered Creighton Memorial St. Joseph Hospital in Omaha as an intern, completing that service July 21, 1924. On August 18, 1924, he returned to Ottumwa, since which time he has been actively engaged in the practice of medicine.

Dr. Rater is an active member of the staffs of the Ottumwa and St. Joseph Hospitals. He is also a member of the International College of Surgeons, the American College of Surgeons, the American Medical Association, the Wapello County, Iowa State, Mississippi Valley, and the Des Moines Valley Medical Societies. He is the present city health physician in Ottumwa. He married Kathryn Camilla Sheridan in June 1926. They have four daughters.

*Dr. Harold Augustus Spilman* was born in Ottumwa, Iowa, June 28, 1888, the son of Dr. Smith Augustus and Alice (Sellers) Spilman. His father, president of the Iowa State Medical Society in 1929, pioneered in the field of modern surgery to become one of the leading surgeons of the Middle West. His mother resides in Ottumwa.

Dr. Harold Spilman was educated in the Ottumwa public schools, graduating from the Ottumwa High School in 1906. He entered

Northwestern University the same year, and continued as a student there until 1913 when he received the B.S. and M.D. degrees. He returned to Ottumwa after graduation and engaged in the practice of surgery under the direction of his father. On August 24, 1915, he was appointed First Lieutenant in the Medical Reserve Corps, and was actively engaged in this service from August 29, 1916 to April 27, 1917, when he was appointed First Lieutenant in the Medical Section of the Officers Reserve Corps and placed on active duty. On August 15, 1917, he was appointed Captain, Medical Section, O. R. C., and advanced to Major March 20, 1918. On June 20, 1918, he entered the Regular Army as First Lieutenant in the Medical Corps; was promoted to Captain August 4, 1920, and remained on active duty until January 10, 1923, when he resigned. On March 7, 1924, he again entered the service, having been commissioned Lieutenant Colonel, Medical Reserve Corps. He was placed on active duty at once, serving at Carlisle Barracks, Pennsylvania, and Ft. Snelling, Minnesota. In January and February, 1941, he served on the National Guard Mobilization Board at Ottumwa and Centerville, Iowa. At present, he holds a commission as Captain, C. A. P., commanding Squadron 721-4 Civil Air Patrol, Ottumwa, Iowa, Auxiliary of the Army Air Force.

Dr. Spilman is a member of the Wapello County, Iowa State, and the Des Moines Valley Medical Societies and the American Medical Association; he is a Fellow of the American College of Radiology; a Diplomate of the American Board of Radiology; and an active member of the staffs of the Ottumwa and St. Joseph Hospitals. He married Myra H. Lawrence September 10, 1912. They have three sons: Lawrence Augustus Spilman, born December 10, 1913, graduated from the U. S. Military Academy, West Point, New York, in June 1937 and who is at present Lieutenant Colonel, A.C., A.U.S., Military Air Attache to Madrid, Spain; Robert Burnette Spilman, born February 19, 1919, also a graduate of the Military Academy at West Point, class 1942, and a Captain in the Armored Forces, 11th Airborne Division, stationed at present in Tokyo, Japan; and James Rogers Spilman, born August 26, 1920, and educated at Northwestern University, Chicago, a Captain in Pan American World Airways and at present based at Rio de Janeiro, Brazil. All of which is why, since Dr. Spilman's hobby is aviation, the friends of the Spilman family often refer to them as "The Flying Spilmans."

(To be continued)



# THE JOURNAL BOOK SHELF

## BOOKS RECEIVED

**THE OSSEOUS SYSTEM, A Handbook of Roentgen Diagnosis**—By Vincent W. Archer, M.D., Professor of Roentgenology, University of Virginia Department of Medicine. The Year Book Publishers, Inc., Chicago, 1945. Price, \$5.50.

**SYNOPSIS OF GENITOURINARY DISEASES**—By Austin I. Dodson, M.D., Professor of Genitourinary Surgery, Medical College of Virginia; Genitourinary Surgeon to the Hospital Division, Medical College of Virginia; Genitourinary Surgeon to Crippled Children's Hospital; Urologist to St. Elizabeth's Hospital; Urologist to St. Luke's Hospital and McGuire Clinic. Fourth edition. The C. V. Mosby Company, St. Louis, 1945. Price, \$3.50.

**DISEASES OF THE BREAST**—By Charles F. Geschickter, M.D., Lt. Comdr., M.C., U.S.N.R., Director of the Francis P. Garvan Cancer Research Laboratory, Pathologist, St. Agnes Hospital, Baltimore; with Special Section on Treatment in Collaboration with MURRAY M. COPELAND, M.D., Instructor in Surgery, Johns Hopkins Medical School, Visiting Surgeon and Assistant Oncologist, University Hospital, University of Maryland Medical School, Visiting Oncologist, Baltimore City Hospital. Second edition. J. B. Lippincott Company, Philadelphia, 1945. Price, \$12.00.

**A TEXTBOOK OF NEURO-ANATOMY**—By Albert Kuntz, M.D., Professor of Micro-Anatomy in St. Louis University School of Medicine. Fourth edition, thoroughly revised. Lea & Febiger, Philadelphia, 1945. Price, \$6.50.

**EVERYDAY PSYCHIATRY**—By John D. Campbell, Commander, M.C., U.S.N.R., Chief Neuropsychiatrist, U. S. Naval Base Hospital No. 8, Formerly Chief Neuropsychiatrist, U. S. Naval Hospital, Charleston, S. C., and Visiting Lecturer in Psychiatry, Medical College of South Carolina. J. B. Lippincott Company, Philadelphia, 1945. Price, \$6.00.

**HEMATOLOGY, For Students and Practitioners**—By Willis M. Fowler, M.D., Professor of Internal Medicine, University of Iowa, Iowa City. With a chapter by ELMER L. DEGOWIN, M.D., Assistant Professor of Internal Medicine, University of Iowa, Iowa City. Paul B. Hoeber, Inc., New York, 1945. Price, \$8.00.

**CLINICAL PARASITOLOGY**—By Charles Franklin Craig, M.D., Col., A.U.S. (Retired), Formerly Director, Army Medical School, and Assistant Commandant, Army Medical Center, Washington, D. C., Emeritus Professor of Tropical Medicine in the Tulane University of Louisiana, New Orleans; and ERNEST CARROLL FAUST, Ph.D., Professor of Parasitology in the Department of Tropical Medicine, Tulane University of Louisiana, New Orleans, Consultant to the Secretary of War, Army Epidemiologic Board on Epidemic and Tropical Diseases, Consultant U. S. Public Health Service, Honorary Consultant, Army Medical Library. Fourth edition, thoroughly revised. Lea & Febiger, Philadelphia, 1945. Price, \$10.00.

**CLASSIC DESCRIPTIONS OF DISEASE**—By Ralph H. Major, M.D., Professor of Medicine, University of Kansas School of Medicine. Third edition, revised and enlarged. Charles C. Thomas, Publishers, Springfield, Illinois, 1945. Price, \$6.50.

**MICROBES OF MERIT**—By Otto Rahn, Professor of Bacteriology, Cornell University. The Jaques Cattell Press, Lancaster, Pennsylvania, 1945. Price, \$4.00.

**IN THE DOCTOR'S OFFICE**—The Art of the Medical Assistant—By Esther Jane Parsons, Formerly Research Technician, Department of Biochemistry, College of Physicians and Surgeons, Columbia University; Formerly Instructor in Medical Office Procedures, Paine Hall School for Medical Assistants, New York City. J. B. Lippincott Company, Philadelphia, 1945. Price, \$2.00.

## BOOK REVIEWS

MITCHELL-NELSON

### TEXTBOOK OF PEDIATRICS

Edited by Waldo E. Nelson, M.D., Professor of Pediatrics, Temple University School of Medicine. With the Collaboration of Forty-Nine Contributors. Fourth edition, revised. W. B. Saunders Company, Philadelphia, 1945. Price, \$10.00.

This book is the successor to the original Griffith and Mitchell Textbook of Pediatrics. These authors died within a month of one another in 1941. The task of carrying on their work has been taken over by Dr. Waldo Nelson, Professor of Pediatrics at Temple University School of Medicine, who was formerly associated with Dr. Mitchell in Cincinnati. In honor of Dr. Mitchell's memory the book bears the title of Mitchell-Nelson.

Dr. Nelson has done an outstanding job in compiling an up-to-date single volume textbook of pediatrics. In keeping with the modern trend, the author enlisted the aid of forty-nine nationally known physicians, most of them pediatricians, who contributed chapters on subjects for which they already had gained national recognition. For instance, Dr. Irvine McQuarrie, Professor of Pediatrics at Minnesota, discusses the subject of convulsive disorders and epilepsy; Dr. Joseph Stokes, virus diseases; Dr. Chevalier Jackson, acute infective laryngotracheobronchitis, among other subjects; and Dr. Louis K. Diamond, the blood. Your reviewer was impressed by the speed and thoroughness with which Dr. Nelson has succeeded in incorporating into his text ref-

erences to recent publications in medical journals. Ingraham's report on his experiences in Boston with subdural hematomas illustrates this point.

The book is written in the divided page pattern which makes for easier reading, is well illustrated, and contains a short reference list at the end of the discussion of each subject for those who wish to pursue further any desired problem.

We would recommend Mitchell-Nelson most highly, even enthusiastically, to anyone who seeks a top-notch standard reference textbook of pediatrics.

L. F. H.

### A TEXTBOOK OF SURGERY BY AMERICAN AUTHORS

Edited by Frederick Christopher, M.D., Associate Professor of Surgery, Northwestern University Medical School, Chief Surgeon, Evanston (Illinois), Hospital. Fourth edition, revised and reset. W. B. Saunders Company, Philadelphia, 1945. Price, \$10.00.

This volume begins with chapters on inflammation, tissue repair, relationship of bacteriology to surgery, and specific surgical infection. To that extent it resembles the surgical textbook of twenty-five or more years ago; but there the similarity ends. It is, in fact, a series of articles covering the entire field of surgery by two hundred outstanding American surgeons who for the greater part are connected with medical schools and teaching hospitals, each writing on a subject in which he has done special work or has special knowledge.

Since this is a large book of over 1,500 pages, with as many illustrations and divided into forty-one chapters, it is possible to touch on only small fragments of the excellent contents in an ordinary review. The chapter on bacteriology includes a comprehensive exposition of the use and effect of penicillin, the sulfonamides, and other antibiotics. This is not in any sense a book of surgical technic or statistics, but a teaching text with lucid resums of pathology, etiology, diagnoses, and principles of treatment.

Chapter VI by Col. Edward D. Churchill analyzes military surgery as applied in World War II. This includes emergency and follow-up treatment of wounds, as well as specialized injuries such as burns and immersion foot. It also briefly explains the technical organization of the army surgical service, including a few statistics and descriptions of special types of trauma produced by modern weapons.

In Chapter VII, boiled down into a little over twenty pages, are the cardinal points of the surgical diseases of the hand by such excellent authorities as Koch, Mason, Bunell, and the editor.

Chapter X devotes something over forty pages to the vascular system. Here de Takats, in addition to the usual data, has a fine summary of the accepted therapy of varicose veins and the newer conception of the causation, prevention, and treatment of thrombosis and embolism.

No branch of surgery is omitted, and this is also true of gynecology which is treated in Chapter XXXV. This chapter includes an excellent outline of endometriosis and the use of endocrines.

This textbook deserves a place in all medical libraries and, one believes, will be more and more regarded as standard.

J. H. H.

#### PHYSICAL DIAGNOSIS

By Ralph Major, M.D., Professor of Medicine, The University of Kansas, Kansas City, Kansas. Third edition, revised. W. B. Saunders Company, Philadelphia, 1945. Price, \$5.00.

This is an excellent presentation of many of the fundamentals of physical diagnosis, with emphasis placed on classical descriptions. The book is sprinkled with direct quotations from the older masters. The author is well aware of the fundamentals required for the teaching of this subject, having many years of experience in teaching medical students.

It is an adequate introduction to physical diagnosis; physical signs and findings, both normal and abnormal, are well described and abundantly illustrated. The elementary facts for a rigid routine in examining patients are emphasized, although at times too much space and stress are devoted to signs of lesser or doubtful value. The four cardinal methods of physical diagnosis (inspection, palpitation, percussion, and auscultation) are well discussed in orderly fashion in connection with each physical system; in addition, there is a chapter on history taking and recording.

It is my impression that this is a very worthwhile book, both for the beginner in physical diagnosis and for the busy practitioner who has partially forgotten some of the principles of this art, in an age where perhaps a little too much reliance is placed on x-ray and laboratory procedures by most of us.

H. G. M.

#### THE 1945 YEAR BOOK OF GENERAL MEDICINE

Edited by George F. Dick, M.D., J. Burns Amberson, M.D., George R. Minot, M.D., William B. Castle, M.D., William D. Stroud, M.D., and George B. Eusterman, M.D. The Year Book Publishers, Chicago, 1945. Price, \$3.00.

As is true of most of the previous numbers of the Year Book of General Medicine, the 1945 volume gives a comprehensive review by authorities of many of the important articles on medical subjects published during the past year. These fall into six general groups: infectious diseases, diseases of the chest, diseases of the blood and blood-forming organs, diseases of the kidney, diseases of the heart and blood vessels, and diseases of the digestive system, and metabolism. Worthy comments upon many of the summaries are made by the able editors.

The text is highly recommended to the practitioner who desires to have in one book form, readily available and indexed, much of the recent literature on general medicine. Naturally, in one such volume, all phases of medicine cannot be covered with completeness.

M. J. R.

#### BACILLARY DYSENTERY, COLITIS AND ENTERITIS

By Joseph Felsen, M.D., Director of Medical Research, Bronx Hospital, New York; Director of International and Pan-American Dysentery Registry. W. B. Saunders Company, Philadelphia, 1945. Price, \$6.00.

The author, who established the International Dysentery Registry and now is its director, has devoted many years to the study of Shiga infections. In this book he is the first to correlate the pathologic and clinical findings of bacillary dysentery, enteritis, and colitis. Historic, epidemiologic, bacteriologic, serologic, pathologic, and clinical evidence is offered which indicates the common pathogenesis of bacillary dysentery, chronic ulcerative colitis, and distal ileitis. Differential diagnosis is made between bacillary dysentery, amebiasis, typhoid-paratyphoid fevers, Salmonella infections, staphylococcal "food poisoning," focal nonspecific enteritis, appendicitis, pneumonia, and meningitis. Sulfonamide, plasma, dietary, vaccine, bacteriophage, oxygenating, serologic, and other forms of treatment, as well as public health measures, are extensively discussed. A hospital epidemiologist is recommended. The completeness of this work is indicated by the length of the bibliography, which consists of nearly one hundred pages.

R. P. N.



## SOCIETY PROCEEDINGS

### Black Hawk County

The regular meeting of the Black Hawk County Medical Society was held in Waterloo at Black's Tea Room Tuesday evening, February 19, at six-thirty o'clock. The guest speaker of the evening was John W. Dulin, M. D., of the Department of Surgery at the State University of Iowa College of Medicine, who spoke on Early Ambulization of Patients.

C. A. Waterbury, Jr., M. D., Secretary

### Calhoun County

Members of the Calhoun County Medical Society met in Rockwell City Thursday evening, February 7, and elected the following officers to serve during 1946: Dr. Paul W. Van Metre of Rockwell City, president; Dr. Francis W. Hobart of Lake City, vice president; Dr. John H. Faust of Manson, secretary-treasurer; and Dr. Robert G. Hinrichs of Manson, delegate. The future prospect of a Calhoun County hospital was discussed, and the meeting date of the Society was set as the third Thursday of each month.

### Davis County

A dinner sponsored by the Davis County Medical Society was held in Bloomfield at the Royal Cafe Friday evening, January 18, in honor of Drs. Charles D. Fenton and George W. Gilfillan of Bloomfield, physicians recently returned from military service, and Dr. Charles D. Shelton of Bloomfield, who had announced his retirement from the active practice of medicine.

H. C. Young, M.D., Secretary

### Greene County

The regular monthly meeting of the Greene County Medical Society was held in Jefferson at Greene County Hospital Thursday, February 21, at 7:30 p. m. Albert J. Jongewaard, M. D., of Jefferson reported on a case of acute endocarditis with emboli.

J. R. Black, M. D., Secretary

### Hardin County

At a meeting of the Hardin County Medical Society held in Iowa Falls at the Princess Sweet Shop Tuesday, January 29, it was voted to accept the contract for the care of county cases.

### Johnson County

The regular monthly meeting of the Johnson County Medical Society was held in Iowa City at Hotel Jefferson Wednesday, February 6, at 6:00 p. m. The scientific program was held following the usual business meeting and consisted of a discussion of

Fluorine in Dental Health by Julian D. Boyd, M. D., and Cyanosis in Infants from Nitrates in Well Water by Hunter H. Comly, M. D., both of the Department of Pediatrics. The discussion was opened by Virgil Cheyne, D. D. S., of the College of Dentistry, who limited his remarks chiefly to Dr. Boyd's paper.

R. H. Flocks, M. D., Secretary

### Muscatine County

At a recent meeting of the Muscatine County Medical Society the following officers were elected to serve the Society during the ensuing year: president, Dr. John L. Klein, Jr., of Muscatine; vice president, Dr. Lysle H. Whitmer of Wilton Junction; and secretary-treasurer, Dr. Keith E. Wilcox of Muscatine. A resolution of sympathy was proposed and adopted by the Society in the death of the Society's late president, Dr. Lysle C. Howe of Muscatine.

### Osceola County

The Osceola County Medical Society held a meeting in Sibley Thursday, January 10, and elected officers for 1946. Those named were Dr. Eerko S. Aeilts, president; Dr. Harold W. Schoon, vice president; Dr. Frank Rizzo, secretary-treasurer; Dr. Earl P. Farnum, delegate; and Dr. Herbert B. Paulsen, alternate. All officers are of Sibley except Dr. Paulsen, who is located in Harris.

### Scott County

The regular monthly meeting of the Scott County Medical Society was held in Davenport at the Lend-A-Hand Club Tuesday, February 5, at 6:00 p. m. Following the business meeting a paper on Hypoproteinemia in Surgical Patients was presented by Merle J. Brown, M. D., of Davenport, who has recently returned from military service.

J. H. Sunderbruch, M. D., Secretary

### Tama County

The Tama County Medical Society held its regular monthly meeting in Tama at Johnson's Cafe Thursday evening, February 7, with the wives of the members as guests. A. J. Havlik, M. D., recently returned from active military duty, presented colored movies which he took in New Caledonia and Sasebo, Japan.

At the January meeting of the Society the following officers were elected to serve during 1946: Dr. Albert J. Wentzien of Tama, president; Dr. Charles R. Roberts of Dysart, vice president; Dr. A. J. Havlik of Tama, secretary-treasurer; and Dr. Gilbert T. McDowall of Gladbrook, delegate.

A. J. Havlik, M. D., Secretary

### Winneshiek County

The Winneshiek County Medical Society was host to the Allamakee, Fayette, and Howard County Medical Societies at the Winneshiek Hotel in Decorah Thursday evening, January 17. The guest speaker of the evening was Harold W. Morgan, M. D., of Mason City, who spoke on Help from the Clinical Laboratory.

### Woodbury County

The February meeting of the Woodbury County Medical Society was held Thursday, February 21, at 6:30 p. m., in the Martin Hotel in Sioux City. Paul F. Dwan, M. D., of Minneapolis, a pediatrician who limits his practice to rheumatic fever, presented a paper on Rheumatic Fever and Its Management.

R. C. Mugan, M. D., Secretary

### Sioux Valley Medical Association

At the meeting of the Sioux Valley Medical Association held in Sioux City January 30 and 31, Dr. Glen E. Peters of Randolph, Nebraska, was elected president for the coming year. Other officers chosen are: Dr. Howard I. Down of Sioux City, vice president; Dr. Robert H. McBride of Sioux City, re-elected secretary; and Dr. Anton Hyden of Sioux Falls, South Dakota, re-elected treasurer.

### PERSONAL MENTION

The JOURNAL is pleased to announce the release of the following physicians from active military duty:

**Dr. Carl A. Aagesen** has received his discharge from the Army Medical Corps and has resumed his practice in Dows. Dr. Aagesen, who held the rank of Captain at the time of his release, recently returned from foreign duty.

**Dr. C. Lorimer Bain** has just recently received his release from active duty in the Navy Medical Corps and plans to resume his practice in Corning in the near future. Dr. Bain, a Commander, was placed on inactive status after more than three years of active duty.

**Dr. Harry S. Bezman** has resumed his medical practice in Traer following his discharge from the Army Medical Corps. Dr. Bezman, who held the rank of Captain at the time of his release, entered military service in May 1943 and recently returned from duty in North Africa, Italy, India, China and Okinawa.

**Dr. Walter M. Block** has returned to Cedar Rapids to resume his practice of medicine after having been discharged from the Army Medical Corps. Dr. Block was on active duty for more than three years, part of which was spent overseas, and at the time of his release he held the rank of Major.

**Dr. Otto S. Blum** has been released from active duty with the Navy Medical Corps and plans to

resume his work at the Rohlf Memorial Clinic in Waverly, where he was the eye, ear, nose and throat specialist before he received his commission in February 1943. Dr. Blum held the rank of Lieutenant Commander at the time he was placed on inactive status.

**Dr. Harold C. Bone** has returned to Des Moines and resumed his medical practice in association with Dr. John T. Strawn after having received his discharge from the Army Medical Corps. Dr. Bone has been on active military duty for the past three years and at the time of his release held the rank of Major.

**Dr. Grant D. Bullock**, who was located in Washta before entering military service, has now received his discharge from the Army Medical Corps and has located in Cushing where he is associated with his brother, Dr. Alfred H. Bullock, in the Cushing Hospital. Dr. Bullock, a Captain at the time of his release, was on active duty for more than three years and just recently returned from foreign service.

**Dr. John H. Butts** of Waterloo has been released from active duty with the Medical Corps of the Navy after more than four years of military service. Dr. Butts held the rank of Commander at the time he was placed on inactive status.

**Dr. Clemmet W. Byrnes** has returned to Dunlap to resume his practice of medicine following his discharge from the Army Medical Corps. Dr. Byrnes, a Captain at the time of his release, recently returned from service in the Pacific Theater.

**Dr. George D. Callahan** has reopened his office in the Paul-Helen Building in Iowa City following his release from active duty with the Navy Medical Corps. Dr. Callahan served in the Navy for thirty-nine months, twenty-one of which were spent in the Pacific Theater, and held the rank of Lieutenant Commander at the time he was placed on inactive status.

**Dr. Elmer H. Carlson** has returned to Muscatine where he will resume his medical practice after serving in the Army Medical Corps since August 1942. Dr. Carlson, who held the rank of Major at the time he received his discharge, recently returned from service in the Pacific Theater.

**Dr. James W. Chambers** has returned to Des Moines and resumed his medical practice in association with Dr. Harry A. Collins following his release from active military service. Dr. Chambers has been in service more than three years and at the time of his release held the rank of Captain.

**Dr. Charles C. Christiansen**, who was located in Dixon prior to his entry into military service, has



now received his discharge and established an office in Grand Mound for the general practice of medicine. Dr. Christiansen served as a Captain with the Army Medical Corps in the Pacific Theater.

Dr. Daniel W. Coughlan has received his discharge from the Army Medical Corps and plans to resume his practice in Des Moines in the near future. Dr. Coughlan, a Major at the time of his release, has been on active duty four years and just recently returned from foreign duty.

Dr. Emerson B. Dawson has reopened his office in the Carver Building in Fort Dodge following his release from active duty in the Medical Corps of the Navy. Dr. Dawson, who recently returned from service in the Pacific, held the rank of Lieutenant Commander at the time he was placed on inactive status.

Dr. Henry G. Decker has been released from active duty with the Navy Medical Corps and plans to resume his practice in Des Moines in the near future. Dr. Decker, a Commander, was placed on inactive status after four years of active duty.

Dr. Francis C. Dunn has returned to Cedar Rapids following his release from active duty with the Medical Corps of the Army Air Forces and plans to resume his medical practice in the near future. Dr. Dunn was in military service more than three years and at the time of his release held the rank of Lieutenant Colonel.

Dr. William C. Egloff has resumed his practice in Mason City after having received his discharge from the Army Medical Corps. At the time of his release from active duty, Dr. Egloff held the rank of Captain.

Dr. Homer S. Elmquist, who was associated with the University Hospitals in Iowa City prior to receiving his commission in the Navy Medical Corps, has now been placed on inactive status. Dr. Elmquist was on active duty almost four years and held the rank of Lieutenant Commander at the time of his release.

Dr. Eugene B. Floersch has returned to Council Bluffs to resume his medical practice following his release from active duty with the Navy Medical Corps. Dr. Floersch served recently as a Lieutenant Commander in the Pacific Theater.

Dr. Louis J. Frank, recently returned from duty in the Pacific Theater, has been placed on inactive status by the Medical Corps of the Navy and plans to resume his practice of dermatology in Sioux City in the near future. Dr. Frank, a Commander at the time of his release, was on active duty three years.

Dr. Leon J. Galinsky, who was staff physician at the State Sanatorium in Oakdale prior to his entry into military service, has received his discharge from the Army Medical Corps and has assumed the position of head of the Broadlawns Tuberculosis Hospital in Des Moines. He succeeds Dr. John Russell, who resigned because of illness. Dr. Galinsky, a Captain at the time of his release, just recently returned from overseas duty.

Dr. Harold L. Ganzhorn has reopened his office in Mapleton after receiving his discharge from active duty as a Major in the Army Medical Corps. Dr. Ganzhorn was in military service three years, most of which time was spent in the Pacific Theater.

Dr. Otto N. Glesne has returned to Fort Dodge after three years of service with the Navy Medical Corps and is resuming his practice of medicine on March 1 when he opens his office in the Carver Building. Dr. Glesne entered the Navy in April 1943 and held the rank of Commander at the time he was placed on inactive status.

Dr. Bernhard B. Gloeckler has resumed his medical practice in Mt. Pleasant after receiving his discharge from the Army Medical Corps. Dr. Gloeckler served as a Captain in the Army Medical Corps and was on active duty for more than three years.

Dr. William C. Goenne, Jr., of Davenport, has received his discharge from the Army Medical Corps after more than three years of active duty. Dr. Goenne, a Captain at the time of his release, saw service in North Africa and Italy.

Dr. Arnold M. Gordon has received his discharge from the Army Medical Corps and plans to resume his medical practice in Des Moines in the near future. Dr. Gordon, a Major, recently returned from service in the European Theater.

Dr. Max R. Greenlee has received his release from active duty with the Navy Medical Corps and plans to resume his medical practice in Oskaloosa. Dr. Greenlee, a Commander, recently returned from duty in the Pacific Theater.

Dr. William O. Griffith of Shelby has received his discharge and plans to resume his practice of medicine in the near future. Dr. Griffith served as a Captain in the Army Medical Corps and recently returned from service in the European Theater.

Dr. A. J. Havlik has resumed his practice at the Tama Clinic, in association with Dr. A. J. Wentzien, following his release from service with the Medical Corps of the Navy. Dr. Havlik, recently returned from active duty with the 1st U. S. Naval Construction Battalion (Special) in the Pacific Theater, held the rank of Lieutenant at the time he was placed on inactive status.

Dr. Maurice J. Healy has returned to Boone after receiving his discharge from the Army Medical Corps and has resumed his medical practice in association with his father, Dr. Maurice A. Healy. Dr. Healy has been in service more than three years and at the time of his release from active duty held the rank of Captain.

Dr. J. Donald Hennessy has received his release from active duty with the Navy Medical Corps and has returned to Council Bluffs where he will resume his medical practice in the near future. Dr. Hennessy has been in service more than three years and held the rank of Lieutenant Commander at the time he was placed on inactive status.

Dr. Donald H. Kast has returned to Des Moines to resume his medical practice after having received his discharge from the Army Medical Corps. Dr. Kast was in military service three and a half years and at the time of his release held the rank of Major.

Dr. Edmund J. Kelley has returned to Des Moines following his release from active duty with the Navy Medical Corps and has opened an office in the Des Moines Building where he will continue his practice of obstetrics and gynecology. Dr. Kelley was in service forty-one months and held the rank of Commander at the time he was placed on inactive status.

Dr. Alfred H. Lekwa has been placed on inactive status by the Navy Medical Corps and has resumed his medical practice in Story City. He was on active duty for more than three years, serving recently as a Commander in the Pacific Theater.

Dr. Clifford E. Lierman has received his discharge from the Army Medical Corps after thirty-nine months of active duty and has established an office in Lake View for the general practice of medicine.

Dr. George S. Marquis of Des Moines has resumed his eye, ear, nose and throat practice in the Equitable Building following his release from active duty with the Medical Corps of the Navy. Dr. Marquis, a Commander, was in military service more than three years.

Dr. Ronald F. Martin of Sioux City, recently returned from service in the European Theater, has received his discharge and resumed his practice in the Davidson Building of that city. Dr. Martin, a Captain at the time of his release, was on active duty with the Army Medical Corps for more than three years.

Dr. Lloyd H. Mattice, who practiced in Danbury before he entered military service, has received his discharge from the Army Medical Corps and established an office in the Nelson Building in Sheldon for the general practice of medicine. Dr. Mattice, a

Captain at the time he was released from active duty, took postgraduate work at the University of Minnesota before opening his office in Sheldon.

Dr. Guy E. McFarland, Jr., of Ames has resumed his practice of medicine and surgery at the McFarland Medical Clinic after having received his release from active duty with the Navy Medical Corps. Dr. McFarland, recently returned from duty on Guam, held the rank of Lieutenant Commander at the time he was placed on inactive status.

Dr. William H. Megorden has received his discharge from the Army Medical Corps and plans to resume his medical practice in Mt. Pleasant in the near future. Dr. Megorden held the rank of Captain at the time of his release.

Dr. Oscar H. Miller has resumed his practice in Estherville following his release from active duty with the Medical Corps of the Navy. At the time he was placed on inactive status he held the rank of Lieutenant Commander.

Dr. Stanley T. Moen, who practiced in Hartley before entering military service, has now been released from active duty with the Army Medical Corps and has a residency in radiology at the University Hospitals in Iowa City. Dr. Moen, a Lieutenant Colonel, served in the Army four and a half years, twenty-eight months of which were spent overseas in the China-Burma-India Theater.

Dr. Gage C. Moore of Ottumwa, recently returned from overseas duty, has resumed his practice in Ottumwa after having received his discharge from the Army Medical Corps. Dr. Moore held the rank of Captain at the time of his release.

Dr. Edwin C. O'Connor has returned to New Hampton and resumed his medical practice following forty-two months of service in the Army Medical Corps. Dr. O'Connor held the rank of Major at the time he received his discharge.

Dr. Modesto R. Paragas has resumed his practice in Creston after serving in the Army Medical Corps since 1942, most of which time was spent in the Philippines. Dr. Paragas held the rank of Major at the time he received his discharge from active duty.

Dr. Thomas E. Pederson of Fort Dodge has received his discharge from active duty with the Army Medical Corps. At the time of his release Dr. Pederson held the rank of Captain.

Dr. Levin H. Peek, who was located in Lake City prior to entering military service, has now received his discharge from the Army Medical Corps and plans to resume his medical practice in Iowa. Dr. Peek, a Captain at the time of his release, was in military service more than three years.



**Dr. Robert J. Porter** has resumed his practice in the Equitable Building in Des Moines following his release from active duty with the Army Medical Corps. Dr. Porter, a Captain, recently returned from service in the European Theater.

**Dr. Leland H. Prewitt** has resumed his practice in Ottumwa after having received his discharge from the Army Medical Corps. Dr. Prewitt held the rank of Major at the time of his release.

**Dr. John R. Rankin** has received his release from service with the Navy Medical Corps and plans to resume his medical practice in Keokuk. Dr. Rankin has been on active duty for more than three years and at the time of his release held the rank of Lieutenant Commander.

**Dr. Edward L. Rohlf** has resumed his practice in Waterloo after having received his discharge from the Army Medical Corps. Dr. Rohlf, a Major at the time of his release, was on active duty for more than three years, during which he saw service in the European Theater.

**Dr. Joseph E. Rose** has returned to Grundy Center after four years of active duty with the Medical Corps of the Navy. Dr. Rose, a Lieutenant Commander, recently returned from duty in Cuba.

**Dr. H. C. Scharnweber** of Boone has opened an office for the practice of medicine in the Boone National Building after having received his discharge from the Army Medical Corps. Dr. Scharnweber entered military service in July, 1943, and served in the European Theater after May, 1944. He held the rank of Captain at the time of his release.

**Dr. Cecil W. Seibert** has reopened his office in the Black Building in Waterloo where he will continue his practice of obstetrics and gynecology. Dr. Seibert recently received his discharge from the Army Medical Corps after forty months of service. He held the rank of Major at the time of his release.

**Dr. Thomas E. Shea** has received his discharge from the Army Medical Corps and is now located in Fort Dodge where he is associated with Dr. Wilbur C. Thatcher. Dr. Shea entered military service in September, 1942, and spent two years in the Pacific Theater as army battalion surgeon with the Seventh Division. He held the rank of Captain at the time of his release.

**Dr. John C. Shrader** has resumed his practice in Fort Dodge, with offices in the Carver Building, after more than three and a half years of active duty in the Army Medical Corps. Dr. Shrader held the rank of Lieutenant Colonel at the time he received his discharge.

**Dr. Roland T. Smith**, who practiced in Des Moines before entering military service, has now received his

discharge from the Army Medical Corps and plans to resume his medical practice in Iowa. Dr. Smith, a Captain, recently returned from service in the Pacific Theater.

**Dr. Glenn P. Speidel**, who formerly was at the State Sanatorium in Oakdale and later located in Providence, Rhode Island, has now been released from active military duty and has returned to Providence. Dr. Speidel held the rank of Captain in the Army Medical Corps.

**Dr. William W. Stevenson** of Rockwell City has been released from active duty with the Navy Medical Corps and has resumed his practice in that city. Dr. Stevenson held the rank of Lieutenant Commander at the time he was placed on inactive status.

**Dr. Clifford W. Thomas** has resumed his practice in Forest City after having received his discharge from the Army Medical Corps. Dr. Thomas, a Major at the time of his release, recently returned from service in the European Theater.

**Dr. Abraham A. Toubes** has received his discharge from the Army Medical Corps and has reopened his office in Highland Park in Des Moines. Dr. Toubes, a Captain, has been on active military duty since June, 1942, and just recently returned from service in the European Theater.

**Dr. Thomas L. Trunnell** has reopened his office in the First National Building in Waterloo after having been released from active duty with the Navy Medical Corps on December 18, 1945. His practice is limited to dermatology. Dr. Trunnell was in military service more than three and a half years and held the rank of Lieutenant Commander at the time he was placed on inactive status.

**Dr. Robert H. Ward** has received his release from active duty with the Navy Medical Corps and is now located in Boston, Massachusetts. Dr. Ward, a Lieutenant Commander at the time he was placed on inactive status, joined the Johnson County Medical Society in 1943 when he was stationed at the Iowa Pre-Flight School.

**Dr. William E. Walsh** has resumed his practice in Hawkeye after more than three years of active duty in the Navy Medical Corps. Dr. Walsh served as a Lieutenant Commander in the Pacific Theater and returned to the States just prior to the time he was placed on inactive status.

**Dr. Rodney C. Wells** has returned to Marshalltown following his discharge from the Medical Corps of the Army Air Forces and plans to resume his practice at the Marshalltown Medical and Surgical Clinic. Dr. Wells entered military service in July, 1942, and held the rank of Major at the time of his release.

Dr. Alroy G. West has returned to Council Bluffs to resume his medical practice after having received his discharge from the Army Medical Corps. Dr. West, a Captain at the time of his release, recently returned from service in the European Theater.

The following physicians reported in the February issue as having resumed their civilian practice were not released from active duty:

Capt. Kyle T. DeYarman of Morning Sun is still on active duty and at present is stationed in Dulag, Leyte, Philippines.

Capt. Donald G. Mackie of Charles City is convalescing from a Potts fracture and at present is located in Danville, Indiana.

Major Leonard P. Ristine is still on active duty and at present is stationed at Fitzsimons General Hospital in Denver, Colorado.

The following physicians, who were previously reported released from active military duty, have announced the establishment of their offices in new locations:

Dr. Galen C. Boller, who practiced in Traer before entering military service, has taken over the practice of Dr. Vincent J. Horton of Calmar, who is retiring for the present because of ill health.

Dr. John W. Castell has become associated with Dr. C. R. Harken in the Harken Hospital in Osceola. Before joining the Army, Dr. Castell practiced in Fairfield.

Dr. Willard O. Courter, who was located in Springfield before he entered the Army, is now practicing in Bend, Oregon.

Dr. Howard G. Ellis of Des Moines, who before the war was associated with Dr. Earl D. McClean, has now established his office in the Bankers Trust Building in association with Dr. Edward W. Anderson.

Dr. Andrew V. Grinley has located in Grand Rapids, Minnesota, where he is associated with the clinic of Drs. Jolin, Jolin and McKenna. Before entering military service Dr. Grinley practiced in Rockwell City.

Dr. Albert E. Hale, who has been located in Dougherty, has now established an office in Mason City.

Dr. Garold G. Henning has established an office in San Antonio, Texas, where he will limit his practice to pediatrics. Before entering the Army Medical Corps, Dr. Henning was located in Milford.

Dr. Charles W. Ihle, Jr., who practiced in Cleghorn a year before entering the Army, has opened an office in Cherokee for the general practice of medicine, with special reference to children's diseases.

Dr. Roy G. Klockslem has established an office in Rockwell City for the general practice of medicine. Before entering the Navy, Dr. Klockslem was located in Odebolt.

Dr. Arthur L. Ludwick, Jr., who was located in Waterloo prior to entering military service, has now established an office in Wenatchee, Washington.

Dr. James W. Paulus of Dubuque, who before entering the Army was on the staff of the Medical Associates, has now opened his office in the B. & I. Building in that city.

Dr. Stephen C. Ware has announced the opening of his office in the Savings and Loan Building in Iowa City for the general practice of medicine and surgery. Dr. Ware was located in Kalona before entering the Army Medical Corps.

#### DEATH NOTICES

Conner, Frank Howard, of Nevada, aged seventy-nine, died January 30 following a short illness. He was graduated in 1898 from the University of Illinois College of Medicine, and at the time of his death was a member of the Story County and Iowa State Medical Societies.

Howard, Fred Henry, of Strawberry Point, aged eighty-six, died February 4 following an illness of several years. He was graduated in 1885 from the Hahnemann Medical College and Hospital in Chicago, and at the time of his death was a member of the Clayton County and Iowa State Medical Societies.

Lott, Guy Alexander, of Osage, aged sixty-three, died February 16 of a heart attack. He was graduated in 1906 from the State University of Iowa College of Medicine, and at the time of his death was a member of the Mitchell County and Iowa State Medical Societies.

Newland, Elmer Ree, of Drakesville, aged sixty-six, died suddenly February 6 of a heart attack. He was graduated in 1904 from Keokuk Medical College, College of Physicians and Surgeons, and at the time of his death was a member of the Davis County and Iowa State Medical Societies.

Porter, Clarence Marion, of Woodward, aged sixty-nine, died February 16 following an illness of several weeks. He was graduated in 1901 from Drake University College of Medicine in Des Moines, and at the time of his death was a member of the Dallas-Guthrie and Iowa State Medical Societies.

Spinharney, Lester James, of Cherokee, aged forty-six, died suddenly February 14 of a heart attack. He was graduated in 1923 from Creighton University School of Medicine in Omaha, and at the time of his death was a member of the Cherokee County and Iowa State Medical Societies.



# The JOURNAL

of the

## Iowa State Medical Society

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No. 4

### *Members of the Iowa State Medical Society:*

It is again my pleasure and privilege to bring to each of you greetings from the faculty of your College of Medicine.

The twelve months since the last College of Medicine issue of our State Journal have perhaps been the most momentous in our experience, with VE-Day—the Atom Bomb—VJ-Day—and not the least, the pleasure of seeing so many of you returning to be one of us again. The faculty of the College of Medicine extends to each of you an especial welcome home. All of our facilities are at your service to assist you in the adjustment from services with the armed forces to the normal American way. I hope that each of you will consider this a personal invitation to visit us for a day, a week, or longer.

May I again thank the Editor of our State Medical Journal for the privilege of greeting you, and request that he permit us to dedicate this fourth annual issue to the memory of those of our graduates who will not come back:

Robert Ward Baker.....	'40
Howard Hopley Barlow.....	'20
Willis Hinton Drummond.....	'24
John Wister Haines.....	'37
Martin Edward Harlan.....	'38
Glenn Ellwood Harrison.....	'28
James Stuart Knipe.....	'43
John Robert McElroy.....	'41
Richard Paul Morden.....	'34
Orville Donald Thatcher.....	'37
Clarence Harold White.....	'31
Norman Eldridge Zahrt.....	'41

E. M. MacEwen, M.D., Dean

## RE-FORMED GALLBLADDER

## A Review of 42 Cases

FRANK R. PETERSON, M.D.

Failure to relieve symptoms permanently following the surgical removal of a diseased gallbladder is a not uncommon experience. The factors responsible are many, of which extension of disease beyond the gallbladder is probably the most common. Cholecystectomy is now almost universally done to eradicate disease within this structure. When symptoms are due to involvement limited to the gallbladder and its duct, cholecystectomy provides permanent relief. However, the operative procedure must include the cystic duct to provide consistently good results.

On December 5, 1941, the author reported to the Western Surgical Association a series of 27 surgical cases at the University Hospitals, the findings placing them in a group designated as "re-formed gallbladder."

The purpose of this paper is to review the subject of re-formed gallbladder and to report an additional 15 cases, or a total, on this date, of 42 cases. These case records are of patients having had a previous "cholecystectomy" who were found to have a pouch consisting of a portion or all of the cystic duct or, in some instances, also a portion of gallbladder wall. This condition we choose to call "re-formed gallbladder." It was so named by my late colleague and chief, Dr. H. L. Beye, who referred to a few of our early cases in a paper published ten years ago.<sup>1</sup>

An analysis would seem to indicate the term "re-formed gallbladder" to be a misnomer, since there is nothing to substantiate the fact that it, or any other similar viscus, can re-form. It is our belief that each of these studied cases represents a dilated cystic duct stump, which tends to assume a shape like that of a normal gallbladder, but except in rare instances is much smaller. If mucosa is present it is like that of the cystic duct with, in addition, as in two or more of our cases, mucosa in the fundus suggestive of gallbladder origin. Its wall shows inflammatory signs. It is responsible for continued symptoms because of the continued infection and a tendency to develop stones. It is even more likely to produce jaundice (20 of 42 cases) than the original gallbladder (Table No. 1) probably because of the close contact with the common duct and the ease with which stones are emptied into this duct. It is the result of failure to include the cystic duct with the gallbladder during cholecystectomy. Although "re-formed gallbladder" may not be an appropriate name, we prefer that terminology in memory of our late chief.

The mechanism of cystic duct dilatation is not obvious, and suggestions as to the cause probably should not be imposed. Back pressure from the common duct is not tenable. The consistent fibrosis found in the wall should resist the low pressure from that source. May it be that intrinsic obstruction, due to stones which block the communication with the common duct, is responsible? Suffice it is to mention that the smallest gallbladder lumen measured after removal was 1 centimeter in diameter, the largest 4, and the average was 2 centimeters.

For this review, 42 case records which have accumulated in the past seventeen years have been studied, including those mentioned by Dr. Beye but excluding several in which the re-formed gallbladder was small and showed no inflammation or other pathologic change. All patients had definite information, or exploration proved the fact that the gallbladder had been previously removed. All had recurrence of symptoms typical of biliary tract disease and of sufficient degree to demand reoperation. Six of the 42 patients were males. The ages varied from twenty-five to seventy-four with an average of forty-eight years. The original cholecystectomy had been done on an average of about eight years previously with the limits ten months and twenty-three years. Symptoms returned on an average of three and two-thirds years after cholecystectomy, varying from no relief to twenty-two years. Seventeen had recurrence of symptoms in one year or less.

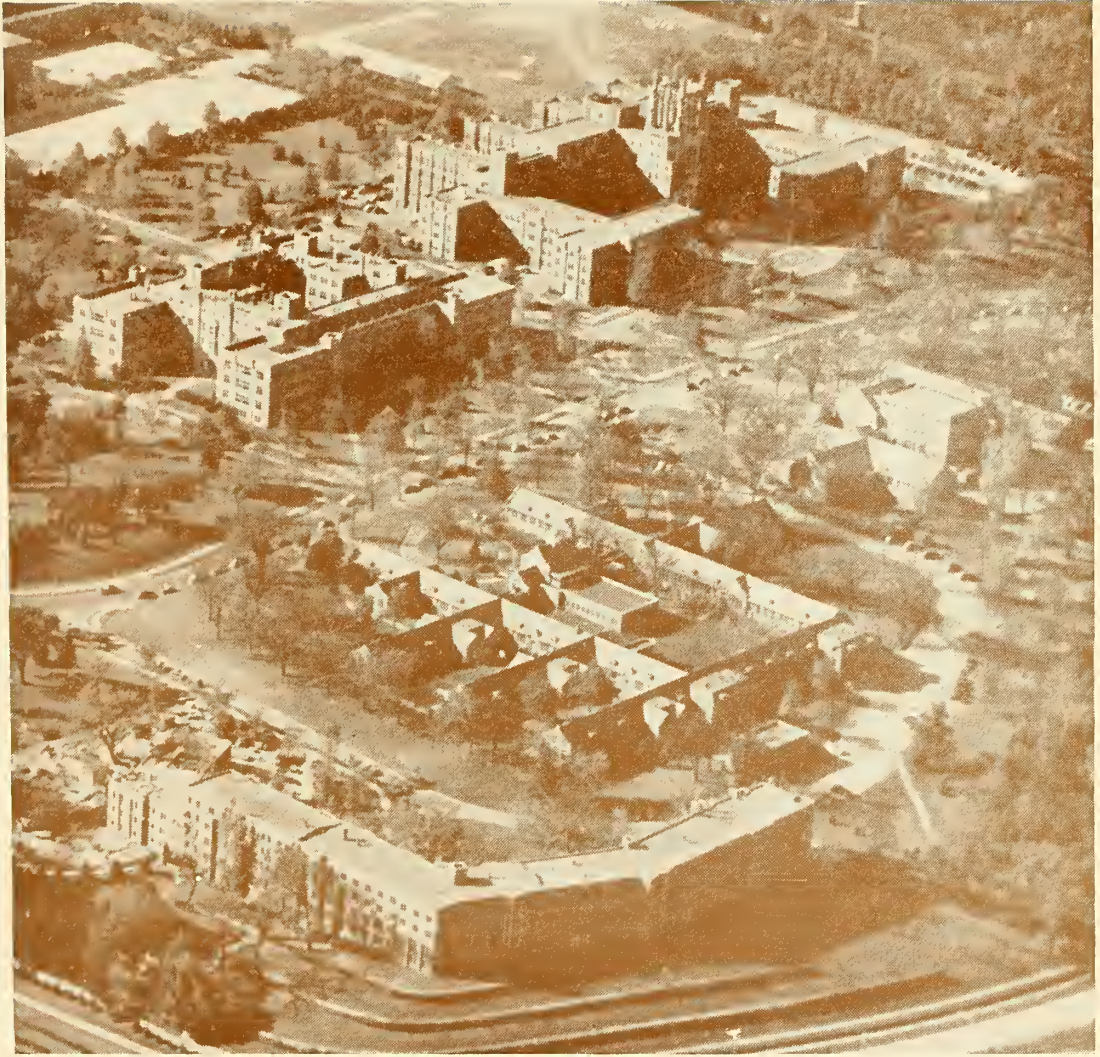
## SYMPTOMS

Although the symptoms in this group varied only slightly, they cannot be considered diagnostic. In all but nine patients colic was the first symptom, and in all but three it dominated the picture. Dyspepsia antedated the colic in the nine and was the ultimate prevailing discomfort in three. There was a history of jaundice in 20 and it was present on admission in 11. Chills and fever were symptoms in about 20 per cent, which is somewhat more common than with the usual biliary tract disease.

It is obvious from the preceding brief analysis of symptoms that colic and dyspepsia supply no more diagnostic information than in a previously unoperated group. The presence or history of jaundice proved to be no more helpful. The incidence, although almost 50 per cent, is of no value when dealing with an individual case. The clinical diagnosis in each instance has been, because of the typical story, some disease involving the biliary tract. The logical specific designation is that of a common duct stone.

It must be emphasized, however, that the presence of a stone in the common duct must be ex-





*Aerial View of  
College of Medicine*





Case No.	Patient	Sex	Age	Gall-bladder Removed	Relief	Prevailing Symptom	Jaundice	Size (cm.)	Stones		Remarks
									GB	CD	
1	E.L.	F	58	15 yrs.	2-3 yrs.	Colic	+	6x1.5	+	—	Epithelium like gallbladder and duct. Considerable inflammation.
2	H.M.	F	37	10 mos.	7 mos.	Colic	—	4x1.5	—	—	
3	Ha.M.	F	29	11 yrs.	few wks.	Colic	+	5.5x1.5	—	—	Postoperative death. Acute pancreatitis.
4	O.Y.	M	48	8 yrs.	1 yr.	Dyspepsia	+	5x2	—	Ca.	Carcinoma in gallbladder extending to common duct. Death.
5	R.R.	F	27	6 yrs.	5 yrs.	Colic	+	6x2	—	—	
6	E.K.	F	43	10 yrs.	1 yr.	Colic	+	3x1	—	—	
7	M.S.	F	45	14 yrs.	4 yrs.	Colic	—	5x2	—	—	
8	R.D.	F	25	8 yrs.	7 yrs.	Colic	—	4x1.5	+	—	
9	K.E.	F	43	1 yr.	4 mos.	Colic	—	.....	+	+	
10	F.R.	F	60	3½ yrs.	3 mos.	Colic	+	5x1.5	+	—	Fistula between gallbladder and duodenum. Death from leak.
11	J.K.	F	51	6 yrs.	1 yr.	Colic	+	1.5x1	—	—	
12	E.H.	M	52	10 yrs.	5 yrs.	Colic	—	4x2	—	—	
13	E.C.	F	36	8 yrs.	5 yrs.	Colic	—	3x1	—	—	
14	C.W.	F	54	5 yrs.	6 mos.	Colic	—	walnut	+	—	
15	H.J.	F	46	11 yrs.	10 yrs.	Colic	—	5x1.5	—	—	Active infection in gallbladder wall.
16	J.F.	F	65	12 yrs.	10 yrs.	Dyspepsia	—	2x1	+	+	Duct and (?) gallbladder epithelium. Marked fibrosis.
17	M.N.	F	59	14 yrs.	7 yrs.	Colic	—	6x2	—	+	Operation through incisional hernia.
18	N.H.	F	31	4 yrs.	1 yr.	Colic	—	5x2	+	+	
19	E.L.	F	56	3 yrs.	1½ yrs.	Colic	+	6x2	+	+	
20	F.S.	F	28	1 yr.	1 mo.	Colic	+	4x2	—	—	
21	J.J.	M	68	3 yrs.	2 yrs.	Dyspepsia	+	1.5x1	—	—	Severe infection in gallbladder.
22	M.K.	F	58	22 yrs.	17 yrs.	Colic	—	7x4	+	—	
23	K.P.	M	28	1½ yrs.	None	Colic	+	2.5x1	—	—	
24	K.McG.	F	48	6 yrs.	None	Colic	+	2x1	—	—	
25	E.C.	F	53	11 yrs.	10 yrs.	Colic	+	6x2	—	—	
26	B.C.	F	53	20 yrs.	14 yrs.	Colic	—	3x1	+	+	
27	T.M.	F	42	2 yrs.	None	Colic	—	5x1	—	—	
28	L.D.	F	45	12 yrs.	11 yrs.	Colic	+	5x1	—	+	
29	M.M.	F	63	12 yrs.	11 yrs.	Colic	—	4x1	+	+	
30	K.M.	F	45	21 yrs.	18 yrs.	Colic	—	3x2	+	+	
31	I.S.	F	36	4 yrs.	None	Colic	—	4.5x2	+	—	
32	P.F.	F	61	26 yrs.	7 yrs.	Colic	—	6x2	+	—	Stone seen protruding partially into cystic duct about ¾ inch in diameter.
33	C.S.	F	49	5 yrs.	None	Colic	+	3x2	—	+	Cholecystectomy '37, Biliary fistula operated '39, and stone removed. Many stones removed '41. Re-formed gallbladder removed '42.
34	G.H.	F	55	2 yrs.	½ yr.	Colic	—	3.5x1.5	—	+	
35	C.B.	M	67	3 yrs.	7 mos.	Colic	+	7x1.5	—	+	
36	C.W.	M	59	3 yrs.	2½ yrs.	Fever Chills	+	3x1.5	—	+	I did cholecystectomy in '42. Many stones. Marked dilatation of cystic duct. Re-formed gallbladder removed '45. Non-faceted stone.
37	S.S.*	F	34	7 yrs.	2 yrs.	Colic	—	6x3	—	—	
38	B.V.	F	60	23 yrs.	22 yrs.	Colic	—	6x1.5	—	—	
39	E.A.	F	53	9 yrs.	1 yr.	Colic	+	4x2	—	—	
40	N.S.	F	74	13 yrs.	9 yrs.	Colic	+	4x1.5	—	+	
41	T.B.	F	47	22 yrs.	21 yrs.	Colic	—	2x2	+	—	
42	F.M.	F	49	18 yrs.	18 yrs.	Colic	+	2.5x2	—	—	

plained. The possibility of either overlooking a stone at the previous operation or its formation in the duct is conceded. We wish to call forcible attention to the fact that a re-formed gallbladder may be entirely responsible. Even since we have been on the alert to discover them, the writer himself has been guilty of removing a stone from the common duct without searching for the cause. A year later when the same patient returned with pain and jaundice and another similar stone was removed from the duct, its origin was found to be a re-formed gallbladder. Such oversights are not complacency building, but are object lessons which have made our staff constantly more alert. In recent years the preoperative diagnosis of re-formed gallbladder has often been correctly made by the resident surgeon. The fact that the diagnosis may prove to be incorrect is not significant; only the proof that it is not correct is significant. The diagnosis is not made from the symptoms; it is made by finding the lesion.

#### OPERATIVE OBSERVATIONS

We all recognize the fact that a previous opera-

tion almost invariably accounts for dense adhesions in the pericholedochus and subhepatic area. They are particularly dense about the hilus and the mesocystic region. Exposure of the common duct, usually easiest and safest near the duodenum, does not expose the re-formed gallbladder except rarely.

In every instance, except one, the gallbladder has been found lying parallel to and definitely behind the common duct. The fundus has been attached to the hilus or right hepatic duct or to the liver, and overlying adhesions and mesentery have made it invisible until exposed by dissection. This almost invariable position seems logically explained by the anatomic relationship of the cystic and common ducts and the natural tendency of contraction of the mesocystium toward the common duct when the fixity of the cystic duct to gallbladder has been relieved by section. Furthermore, the junction of the cystic and common duct is normally at a point definitely posterior to a sagittal section with an acute angle between the two ducts. Since they are enclosed in the same mesentery, it tends to keep them in close apposi-

tion. Thus a cystic duct divided at its junction with the gallbladder will be drawn to a position essentially parallel and posterior to the common duct.

Although this paper deals less with the means of prevention than with recognition of re-formed gallbladders, it seems pertinent to stress this point. Literature does not emphasize removal of the cystic duct with cholecystectomy. It has, and rightly so, strongly warned of the danger of injury to the extrahepatic biliary ducts in routine cholecystectomy, but in so doing has not indicated the morbidity associated with failure to remove the cystic duct. In our experience this oversight has necessitated reoperation far more often than has operative injury to the hepatic or common ducts.

Our desire is to reiterate the prevailing demand that in biliary tract surgery the common duct must be routinely exposed; its appearance and size, when brought into view by careful but safe dissection, should be carefully studied, since they reveal much in the way of intrinsic pathology which may demand exploration. Exposure does much more. By reflecting downward the leaf of the hepatoduodenal mesentery, the position of the common as well as the cystic duct in its entirety may be brought into view when traction is placed on the proximal gallbladder. The junction of the ducts can then be definitely seen, and ligation of

gallbladders are not seen until they are exposed by dissection of adhesions and the mesentery, especially on the caudad and posterior surface of the common duct well into the hilus (Fig. 1). The only outstanding exception in this group was one instance in which the fundus of the gallbladder

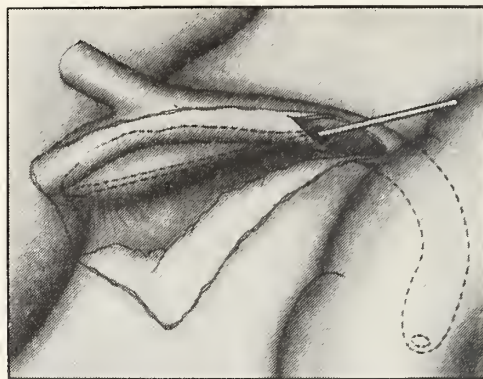


Fig. 2. Means of diagnosis of many of these reported cases. Cystic duct opening tends to be dilated. A blind pouch, and locating right hepatic duct separately, makes the diagnosis.

was tightly adherent to the duodenum and when freed a fistula between the two lumina was exposed.

A considerable number of the gallbladders were identified primarily by probing through the cystic duct orifice; and this exploration is advocated as a routine procedure in every instance of common duct exploration when a previous cholecystectomy has been done. It has been observed that with a complete, proper cholecystectomy there will be no opening, or at least no pouch. It has also been noted in this group that in most instances the cystic duct opening was not only patent but dilated, and except for two instances of impacted stone and one of carcinoma which obstructed complete passage, probe could be passed to the fundus (Fig. 2).

In some early experiences the result of passage of the probe into a blind pocket was confusing. The large opening and the course of the probe toward the hilus seemed to indicate an exploration of the right hepatic duct. The abrupt stop is always indicative of the possibility of this lesion, however, and the ultimate demonstration of the patency of the hepatic ducts in their normal position makes the diagnosis certain. Several of the gallbladders were discovered by this means alone and in all the facility of exposure and removal was greatly enhanced by the presence of a solid instrument in its lumen (Fig. 3). Furthermore, a sound in the common hepatic duct locates its position in relation to the gallbladder and makes dissection of the latter relatively safe. Frequently it is difficult, even so, because of the density of the

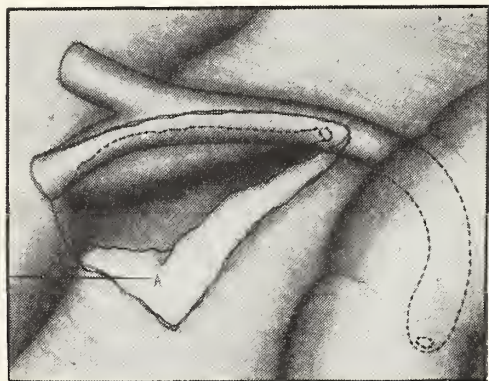


Fig. 1. The common location of re-formed gallbladder, invisible until adhesions and mesenteric structure had been divided. A—reflected adhesions and mesentery.

the cystic duct can be done without distortion of the common duct or leaving a cystic duct stump. A properly performed cholecystectomy must include the entire cystic duct. When so done there will be few\* re-formed gallbladders, and there need occur no accidental injuries to ducts.

We again wish to emphasize that re-formed

\*Note: Case No. 36: Cholecystectomy done by author. Cystic duct greatly dilated but ligated at "junction with common duct." Colic and jaundice three years later. Surgery revealed stone in common duct. Search disclosed a re-formed gallbladder, obviously the origin of the stone.



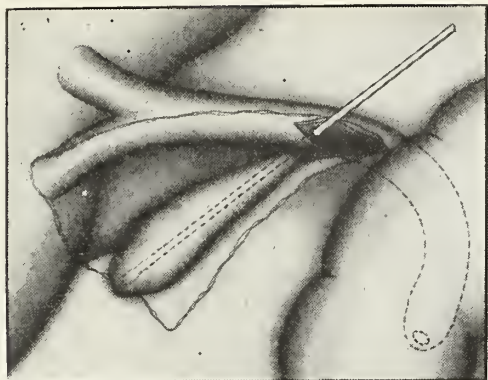


Fig. 3. Mobilization of adherent "gallbladder" simplified with probe in place. A sound in the common duct is also suggested.

adhesions and the lack of a line of cleavage especially at the fundus.

The following case report is representative of the group:

Case No. 26—B.C., a woman fifty-three years of age, reported that removal of her gallbladder in 1929 had revealed stones. Upon reoperation in 1936, stones were removed from the common duct. In 1940 the patient had recurrent colic until admission to the SUI Clinic in June, 1941.

At operation, palpation revealed a slightly dilated common duct containing at least one stone, an indefinite invisible mass behind the common hepatic duct. The common duct was opened and two stones removed. The cystic duct opening was easily found, and a probe was passed about 4 centimeters, to a blind end into the above described mass. Adhesions below the duct were divided—exposing a re-formed gallbladder. This was dissected free from the common duct. Adherence was so great that a small opening (fistula?) was made into the duct. The "cystic duct" was tied and a T-tube inserted. Exploratory and traumatic openings were closed with silk.

**Pathologic Report:** Thick "gallbladder" wall. Mucosa mostly absent, but occasional islands of low cuboidal cells. Fibrotic wall infiltrated with plasma cells and lymphocytes. One gallstone in gallbladder like those in common duct.

**Diagnosis:** Chronic cholecystitis. Cholelithiasis.

**Comment:** 1. At the previous reoperation re-formed gallbladder was overlooked.

2. It might have been left at this operation had not the cystic duct been probed and its presence proved, since the stones in the common duct were sufficient explanation for her symptoms.

3. The common duct stones almost certainly originated in the re-formed gallbladder, since they were identical and had been removed once previously.

It is of interest that when stones were found in both gallbladder and common duct, they were of similar size and shape. When stones were found only in the common duct, the cystic duct opening was always large, and it can be logically

presumed that the stones passed from the gallbladder to the duct. It may be presumptuous to state that when no stones were found the symptoms were due to entrance of stones into common duct which later passed into the duodenum, but the frequency of colic and jaundice suggest this to be a probability.

Another case report is included which in some respects is exceptional. Incidentally, the preoperative diagnosis was a re-formed gallbladder because of the many severe colic attacks and the presence of the originally removed gallbladder and stones in a bottle on the stand by the patient's bed:

Case No. 22—M.K., a woman fifty-eight years of age, had had a cholecystectomy in 1919. (She brought gallbladder and 9 stones with her.) She had had relief until 1935, but had had two or more typical gallbladder attacks yearly since that time, with five attacks in five weeks just before admission in March, 1941. The colic was relieved by morphine. There was no jaundice, chills or fever.

**Diagnosis:** Re-formed gallbladder or common duct stone.

**Operation:** The common duct and duodenum were exposed. The duct seemed normal but was opened. No pathologic changes were noted. A probe through the cystic duct orifice was passed about 8 centimeters to a blind end. Adhesions were freed from the common duct to the hilus exposing a cystic mass plastered to the duct—pear-shaped, fundus at hilus—structure dissected free to small duct opening into the common duct.

**Pathology Report:** A 7x4 centimeter tubular structure shaped like gallbladder contained two faceted stones. Inflammatory cells throughout fibrous and muscular wall. Mucosa lacking.

**Diagnosis:** Chronic cholecystitis and cholelithiasis.

**Comment:** 1. Comparison of original and re-formed gallbladder show latter to be even larger than the shrunken original (Fig 4).

2. A small cystic duct opening, large gallbladder, and stones suggest symptoms were due to hydrops. This was an instance in which the opening into the

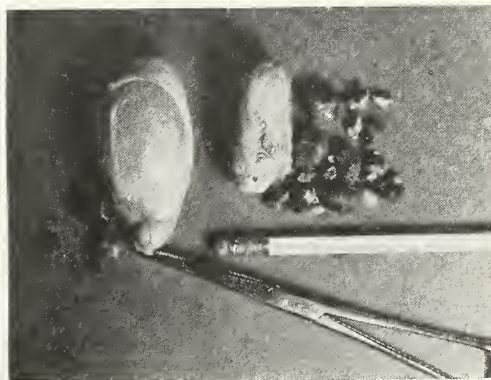


Fig. 4. Photograph of gallbladder and stones (right) removed twenty-two years prior to re-formed gallbladder (left). Case No. 22.

common duct was small. Frequent obstruction may have accounted for the large size of the gallbladder. This mechanism may conceivably cause the dilatation in all re-formed gallbladders.

#### RESULTS

A follow-up report has not been attempted, principally because the situation in our state is such that practically all patients treated in our clinics are returned if further surgery seems necessary. To date one of the forty-two has been re-operated upon for symptoms referable to the biliary tract, and a dilated but otherwise normal common duct explored.

Three of the group died postoperatively. Post-mortem examinations in two revealed an acute pancreatitis in one and in the other a general peritonitis. The latter occurred in the patient with the previously mentioned fistula between gallbladder and duodenum, and followed a leak which occurred at the site of closure. The third patient had a carcinoma which obviously originated in the re-formed gallbladder and secondarily invaded the common duct.

#### CONCLUSIONS

Re-formed gallbladder is actually a dilatation of the cystic duct stump which can result only with an incomplete cholecystectomy. The mechanism of dilatation is not known. The most logical explanation seems to be obstruction. If this is granted, then intrinsic stones must be the inciting factor. In only 23 of the 42 cases were stones found in the biliary tract. This discrepancy may be explained on the previous expulsion of the concretion, not only from the gallbladder but also from the common duct.

The symptoms, typical of biliary tract disease, could not be explained on the basis of stones in 19 instances, at least as regards the operative findings. Granted that in none of these the symptoms were due to stones, a questionable assumption we believe, the constant close adherence of an inflamed gallbladder to the common duct, with resulting edema of the latter, traction distortion of the common duct, and actual pressure by the gallbladder or an enlarged lymph node mass, adequately explained the symptoms in most of the others. Malignancy, fistula with the duodenum, and intrinsic gallbladder infection accounted for the remainder.

Re-formed gallbladder must be considered as a possibility whenever there is a recurrence of symptoms following a cholecystectomy. In our clinic, since emphasis has been made to rule out the entity in every surgical patient, we have removed on the average of four each year. Only by a careful exploration of the pericholedochus area

and a probing through the cystic duct opening, since the common duct should be opened routinely, will the lesion be discovered. Our experience indicates that at least 95 per cent will be overlooked unless these rules are consistently followed.

We do not suggest a new discovery in the reporting of this group of cases but we know this little-mentioned condition merits a consideration far greater than has been given it in the past.

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#### PRESENT TRENDS IN PSYCHIATRY

WILBUR R. MILLER, M.D.

The returning veteran will have had more direct personal experience with psychiatric examinations, treatment, and advice than any other segment of our population. He will have gone further in breaking down the old prejudices and fears regarding illnesses and maladjustments having a "mental" etiology than will have civilians. He will accept the fact that his personality needs treatment as well as his gastro-intestinal tract. He will wonder why the average physician has so little understanding or sympathy for a person with such disorders.

Our armed forces, early in the war, became disturbingly aware of the necessity for selecting men with stable personalities. Physicians with experience in evaluating personality reactions were pitifully few, even among the psychiatrically trained. Most psychiatrists had worked chiefly with those who already had had mental or nervous symptoms well established. Psychologists had developed no reliable personality tests applicable to large numbers. There was little in the way of statistics or studies from the First World War to point the way. The result was that even with the screening of the obviously unstable, 30 to 35 per cent of all the battle casualties were neuropsychiatric in nature. Even during peacetime the total number of psychiatrically trained physicians was a fraction of the total, and so it meant the army trained its own psychiatrists. The recognition of early treatment, the value of narco-analysis, and group therapy rapidly developed and became important aspects of army medicine. It was not a matter of dealing with psychotics, but how to recognize and treat the large numbers of men who reacted to the strain, danger, and discomforts of war, with symptoms which tended to incapacitate them from further effective duty. Whether or not we call such reactions "neuroses" depends on

Director, State Psychopathic Hospital; Professor and Head, Department of Psychiatry, State University of Iowa.



how much we consider such terms specific. To the soldier and to the civilian it is of considerable significance, no matter how much we try to re-educate the public to think otherwise. But in either case, the man who has been in military service wants such reactions treated. Furthermore, he knows they can be treated. When he is discharged from the military service, he will come back to a civilian situation which will not offer him many opportunities in various sections of the country.

In Iowa, at the present time, care for the mentally ill is largely centered about our four state hospitals, which are overcrowded. At the State University in Iowa City, the Psychopathic Hospital is able to admit about 350 patients per year and sees about 1,500 patients per year through its out-patient service. It is designed primarily for the observation and care of mental illness which can be treated, research, and teaching. At Knoxville is the Veterans Hospital for the care of mentally ill veterans. There are two private hospitals which accept a small number of patients; one is located in Des Moines and the other in Council Bluffs. Very few of the general hospitals will accept mentally ill patients except as extreme emergencies, although many patients with psychoneuroses are admitted and treated as if they had an organic illness.

Des Moines has no psychopathic hospital, nor does the Broadlawns Hospital have more than a very limited psychiatric service. There is a Child Guidance Clinic in Des Moines, supported by the Community Chest, with a psychologist in charge but only part-time psychiatric consultation. The Veterans Bureau has established a Mental Hygiene Clinic in Des Moines in connection with the Veterans Hospital for the help of veterans. As yet the clinic is small, however, and is not able to accommodate many patients. A very few private psychiatrists are listed in Iowa. In addition to these are a few men who are primarily neurologists, but who do consultation work in psychiatry.

Therefore, aside from the out-patient clinic of the Psychopathic Hospital, there are few facilities for the patient suffering from neuroses or emotional disorders. The average physician has not, in the past, had the interest or training to treat many such patients psychotherapeutically, although some men, in a wise and sensible manner, manage such patients well and give them considerable help.

During the war years there has been a steadily mounting interest on the part of medical students and younger physicians in "psychosomatic" medicine. This term is generally applied to those disorders with complaints referring to the various

organ systems but caused by emotional factors. Various gastro-intestinal disorders such as "spastic bowel" and irritable bowel, cardiac disorders such as flutter, skipped beats and pseudo angina, and conditions of chronic fatigue and loss of appetite would be typical of such disorders constantly coming to the attention of the practitioner.

In the teaching of medical students, we are constantly emphasizing a point which is part of the art of medicine, but not always fully appreciated by those who practice it most ably. The point is that the skillful and able physician treats the "man" and not the disease. Even the surgeon who is removing an appendix, if he is a good physician, is interested in knowing as much as possible about the person from whom he is excising the offending part. Most surgical pathologists agree that they see more normal appendices than diseased ones. Although an appendectomy is often better performed when there is a question of doubt, the interest in the patient should also continue if the appendix proves normal. Many such patients are seen later in psychiatric practice, when it becomes more apparent that the earlier symptoms were the first signs of emotional upset. The old saying that "the road to a neurosis is paved by abdominal scars" is, unfortunately, still too true.

The kind of psychiatry which is needed most today is not the specialty for the care of the more obviously psychotic or severe neurotic, but the kind of psychiatry that should be a part of the knowledge of every skilled physician. As was pointed out earlier in this paper, there are far from enough facilities for the treatment of those with emotional disorders in our state and in most other states. In Iowa we do not have enough institutions and staffs to care for the serious mental illnesses, let alone those that are less incapacitating. Many physicians, particularly internists, estimate that from 30 to 40 per cent of their practice is composed of people suffering from neuroses or psychosomatic illnesses. Many of these men say frankly that they feel at a loss how to deal with such patterns except symptomatically. In our clinic we could utilize our out-patient department full time for referrals from the general hospital alone. However, because of heavy demands from outside services, we are forced to see only their more pressing problems.

There is one answer suggested to help in alleviating this problem. The medical profession must train its members so that they are better fitted to recognize and treat such disorders. The military forces were compelled to do so by the sheer number of such patients that overwhelmed their medical facilities.

Physicians have not been interested in psychiatry or its principles, despite the fact that for years they have known psychiatric disorders make up a tremendously large proportion of our ill people. On the other hand, psychiatrists had not emerged from their institutional isolation or talked in a language that stirred the interest of the medical student or intern. It has been our experience that the majority of interns and medical students on our service like their work with mental patients and quickly rid themselves of prejudices they had acquired earlier in their training. In addition, we must still face the unalterable fact that there are strong and undeniable misconceptions and fears on the part of even educated people regarding any illness that has mental or emotional roots as its etiology. The patient and particularly his relatives feel there is something disgraceful or a sign of weakness about such an illness. It is true that severe nervous and mental disorders interfere with a person's ability to manage his own affairs and to exercise his own control over his behavior. As a result, legal protection and control have been developed to care for such situations. The majority of people suffering from the less incapacitating disorders, which are far more numerous, are as capable of exercising good judgment as a medically or surgically ill patient. This is one of the strongest arguments that can be advanced as to why general hospitals and general practitioners must be able to care for such patients. General hospitals must have clinics and wards for the neurotically ill and for those with psychosomatic problems. Psychiatrically oriented internists are the most suitable physicians to supervise the treatment. Psychiatric specialists will be needed for the more complicated disorders, but not for the average anxiety-produced reaction. There is nothing mystical or intangible about the majority of nervous conflicts or worries. To get at their source demands common sense, the ability to secure the patient's confidence, and an interest in human beings. These are all the attributes of any good doctor who is a physician as well as a scientist.

In psychiatry itself, one of the most effective treatments yet devised is the electroshock treatment for depressions. The skill comes not in giving the treatment but in diagnosing the disorder, particularly in its early stages, when the first symptoms are likely to be somatic in nature. Loss of sleep, gastro-intestinal complaints, and loss of energy are the early symptoms. Because of the danger of suicide and sometimes even of homicide, the illness is not one that can lightly be dismissed. The treatment, which is highly effective, is much more closely related to physical medi-

cine than psychotherapy. Yet most general hospitals are not equipped to give such patients protection or nursing care. Such patients are not "insane" in the generally accepted meaning of the word, and in the majority of cases come to a psychiatric clinic as "voluntary" patients as opposed to "committed."

Most state medical societies, and ours is no exception, show no organized interest in the problem of mental illness, despite the fact that the population of the mental hospitals exceeds that of all the general hospitals. There are no committees on psychiatry, but there are committees on tuberculosis, maternal care, and other specialties. The care of the mentally ill has been one of the earliest and most widespread examples we have of state medicine, simply because private and individual resources have been totally unable to cope with the magnitude of the problem. Unless we as a medical profession are willing to face the problem of the care of the lesser disorders as presented to us by the increasing recognition of emotional disorders, it, too, will become a responsibility of state and federal government. The federal government is already making high strides in that direction with plans for new hospitals for veterans and the setting up of nation-wide mental hygiene clinics. In addition, it is developing programs for the training of psychiatrists and offering well paid positions to men who have received psychiatric training.

Unless our medical schools, our general hospitals, and our state and national medical societies are willing to recognize the implications of the present trends, it is becoming increasingly evident that another large segment of our population will receive its care and treatment under government and state medicine. There is probably no branch of medicine where the patients needs the individual interest and care of his personal physician as much as do those suffering from emotional disorders.

#### OPEN MEETING APRIL 18

There will be an open meeting Thursday evening, April 18, as part of the annual meeting of the Iowa State Medical Society. This will be held in the main ball room at the Hotel Fort Des Moines at eight o'clock. All doctors, their wives, friends and interested persons are invited to be present.

Speakers will be Major General Paul R. Hawley, Acting Surgeon General of the Veterans Administration, who will discuss medical care for veterans, and Senator B. B. Hickenlooper, who will give a broad picture of social security and pending legislation affecting it.



TOXIC MANIFESTATIONS OF LARGE  
DOSES OF VITAMIN D AS USED IN  
THE TREATMENT OF ARTHRITIS

WILLIAM D. PAUL, M.D.

Although vitamin D is being used in massive doses in the treatment of arthritis, little or no attention is being paid to its possible toxicity. The rationale of this form of therapy is based on the observation of Rappaport and Reed,<sup>1</sup> who noted some relief in the joint symptoms of two patients who were receiving vitamin D for asthma and hay fever. After this isolated observation, Dreyer and Reed<sup>2</sup> used massive doses of vitamin D in the treatment of arthritis, and reported excellent results. Many of their patients, however, had toxic reactions to the drug. Many rheumatologists have reported that vitamin D is of little or no value in the treatment of arthritis, and that the incidence of serious hypervitaminosis has been very high. The adherents of the use of vitamin D have claimed that its toxicity has resulted from the methods of manufacture, rather than from the vitamin itself.

Five cases are presented in this study to illustrate the clinical signs of vitamin D poisoning. The less severe symptoms include loss of appetite, nausea, vomiting, abdominal cramps, diarrhea, polyuria, and polydipsia; the more severe signs include renal failure, demineralization of long bones, and metastatic calcification of soft tissues.

Case 1.—M.D., aged 50, was seen in the University Hospital December 19, 1944, because of lumbosacral pain, nausea, and abdominal distress. She had started self medication with vitamin D nine months previously; she had taken 50,000 USP units of activated ergosterol in oil daily and gradually increased the dose to 200,000 units daily. This latter dose had been continued for forty-five days, and in addition she had taken 7.5 grains of calcium (type not known) four times a day. Four weeks after starting the maximum dose she had developed anorexia, nausea, polyuria, polydipsia, and headache. The symptoms had persisted until all therapy had been discontinued. During this period she had lost twenty pounds in weight. It was of interest that she had had no alleviation of her back pain.

Our examination was carried out about a week after discontinuance of vitamin D ingestion. The physical examination and routine laboratory tests were essentially negative. The specific gravity of the urine ranged from 1.020 to 1.030; no albumin or casts were found. The blood urea nitrogen, creatinine, and urea clearance were well within normal limits. The blood calcium and phosphorus and urinary calcium and phosphorus were at the upper limits of

normal. The genito-urinary tract was entirely normal. No abnormalities were noted in the electrocardiogram. She was advised against the use of vitamin D and was given physical therapy.

The early and usual symptoms of overdosage of vitamin D are well illustrated in the case of this patient. According to Bills,<sup>3</sup> the first signs of vitamin D poisoning are a sense of well-being and an increased appetite, followed shortly by nausea and loss of appetite. The syndrome soon includes vomiting, abdominal cramps, and diarrhea. Frequent urination and increased thirst appear early, and may even occur before the onset of nausea. Neuralgia along the course of the mandibular branch of the trigeminal nerve, tenderness of the gums and teeth, pain in muscles and joints, dizziness, muscular weakness, headache, haziness of memory, and, occasionally, numbness and tingling in the extremities may, also, be included in the list of symptoms. The urine, as a rule, is pale and limpid, has a low specific gravity, and contains a trace of albumin. Microscopic examination reveals many hyalin and granular casts. The blood serum calcium is elevated. The serum phosphorus at first may be less than normal, but later approaches normal; the serum phosphatase is normal, and the blood phosphorus is normal. An increase of the nonprotein nitrogen and creatinine may occur.<sup>4,5,6</sup>

The effects of overdosage of vitamin D can be terminated abruptly by discontinuance of the drug. The early changes are transient, since the progress is reversible and reparable in the majority of cases.<sup>7</sup> If the symptoms persist, the intravenous injection of physiologic salt solution should be tried. Crimm, et al.,<sup>8</sup> report that saline is a specific antagonist of the hypercalcemia which results from the administration of vitamin D, and that its use may bring about prompt recovery.

Case 2.—J.W.D., aged 58, was first seen by us November 28, 1944, when he complained of nausea and vomiting. He had been bothered by flatulence, eructations, and stiffness of the large joints. In September, 1944, he had begun the self administration of vitamin D because of his joint pains and "loss of pep." He had taken three tablets a day, each containing 50,000 USP units. About six weeks later he had noticed a rather sudden onset of nausea and vomiting, headache, polydipsia, and polyuria. The headaches had responded to aspirin and had lasted only one day. The polyuria had not been very marked and had persisted for about a week. However, the craving for fluids had been pronounced, and the patient had relieved his thirst by drinking large quantities of milk, most of which he was able to retain. The nausea and vomiting had terminated after his physician had given him large doses of an antispasmodic and after the patient had discontinued taking vitamin D. Since that time he had felt con-

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This study would not have been possible without the assistance of Dr. C. Rhomberg. The eye examination was carried out by Dr. P. J. Leinfelder; the calcium determinations were performed by Dr. Genevieve Stearns.

siderably better. This man had been blind for many years and had worked as a music teacher.

The patient's past history and systemic inventory were non-contributory. The physical examination was essentially negative except for opacities over both corneae, slight enlargement of the prostate, and a few hemorrhoidal tags. The cardiovascular system, including the blood pressure, was entirely normal.

Examination of the urine revealed a moderate number of hyalin and granular casts and a faint trace of albumin. The specific gravity of the urine varied between 1.002 and 1.006. Fluids were withheld for twenty hours, and, following this, the highest urine specific gravity recorded was 1.008. The blood calcium was 11 milligrams per cent. The blood phosphorus was 2.7 milligrams per cent. The blood urea nitrogen and creatinine were normal, but the urea clearance test was only 56 per cent of normal. Complete studies showed that the genito-urinary tract was entirely normal. Roentgenologic examination of the gastro-intestinal tract revealed no abnormalities. The electrocardiogram showed no deviation from normal.

The patient was again examined February 6, 1945, and at that time he had no complaints other than slight fatigue. The laboratory procedures were repeated with the same results. The specific gravity of the urine after a concentration test was 1.010. At this time no albumin or casts could be found. The urea clearance was still only 52 per cent of normal.

Case 2 illustrates, in addition to the gastro-intestinal symptoms, the more serious complication of impaired renal function resulting from vitamin D poisoning. Six months after discontinuing the drug, the patient still had a low urine specific gravity, inability to concentrate urine, and an abnormal urea clearance.

The mechanism of the renal damage from vitamin D can be explained by the effect of the vitamin on the blood calcium. Klein<sup>9</sup> fed irradiated ergosterol to albino rats and found that the blood calcium concentration was 50 per cent greater than in normal rats. Crimm and Strayer<sup>10</sup> observed that massive doses of vitamin D resulted in hypercalcemia in spite of the absence of any change in the hydrogen ion concentration of the blood. Smaller doses of irradiated ergosterol may also increase the serum calcium.<sup>11</sup> The extra calcium poured into the blood stream under these conditions comes from a demineralization of the bones.<sup>12</sup> The hypercalcemia is always accompanied by an increase in the volume of urine. This probably accounts for the polyuria in such cases.<sup>13</sup>

The elevation of the serum calcium is not constant; the high levels fluctuate widely and show little correlation with the dosage of the drug.<sup>7</sup> The urinary calcium is always increased.<sup>4,13</sup> The kidneys, in attempting to reduce the hypercalcemia,

excrete large amounts of water and calcium; the latter acts as an irritant to the renal tubular epithelium. This may cause a trace of albumin to appear in the urine. The changes are similar to those in sulfonamide nephritis<sup>14</sup> and, at this stage, are still reversible.

Case 3.—E.O., aged 49, entered the University Hospital October 25, 1944, complaining of headache and vomiting of about seven months' duration. For many years she had had attacks of pain and swelling and stiffness of the joints of her hands, wrists, ankles, and knees. About March, 1944, she had begun self medication with vitamin D, hoping to obtain some relief from the joint pains. She had varied the dose from 100,000 to 300,000 USP units of viosterol daily. Shortly after this she had developed severe frontoparietal headache which had been only slightly relieved by aspirin. A week after onset of the headache she had become extremely nauseated and had vomited five to six times a day. The headache had usually been worse in the morning and, at times, had been accompanied by dizziness. The vomiting had, as a rule, started soon after she had arisen in the morning. These symptoms had persisted for three to four days at a time, and had then disappeared for about the same length of time. However, some soreness of the head and epigastrium had persisted during these intervals. Besides these symptoms she had had increased urinary frequency, urgency, and polyuria. Polydipsia had been present between the attacks, but when the headache and vomiting had been marked the patient had not drunk water. During these times she had, also, stopped taking vitamin D, a fact which probably accounted for her periods of relief. Since March, 1944, she had lost ten pounds in weight, and she had become convinced that she was suffering from cancer or, at least, a peptic ulcer. The past history was not remarkable except for the arthritis.

Physical examination showed nothing but tenderness in the epigastrium and in the left lower quadrant of the abdomen. There were moderate deformity and limitation of movement of the elbows, knees, ankles, toes, and fingers to a degree compatible with rheumatoid arthritis. The urine had a specific gravity of 1.012; there was a moderate amount of albumin, and microscopic examination revealed many granular casts, as well as a few hyalin casts and a few white blood cells. The urinary specific gravity was 1.017 after fluids had been withheld for twenty hours. The hemoglobin was 11.5 milligrams, the erythrocyte count 3,750,000, and the leukocyte count 10,400. The differential leukocyte count was essentially normal. The Kolmer, Kahn, and Kline tests were negative. A urea clearance test was done, but this could not be estimated accurately because insufficient amounts of urine were obtained. The blood calcium was 12 milligrams per cent, and the blood phosphorus 3.1 milligrams per cent. Roentgenologic examination showed that the gastro-intestinal tract was entirely normal. No renal calculi could be found.

The patient was assured that she had no serious



organic disease and was told to discontinue the use of vitamin D. Although she did not return for another examination, we heard from her on several occasions over a period of months. The symptoms of vitamin D intoxication had disappeared, but she was still looking for a remedy for her arthritis. It is of interest that her joints were not as painful while she was taking vitamin D.

In some of the series reported, 80 per cent of the patients who were receiving massive doses of vitamin D developed nausea and vomiting.<sup>15</sup> Many of these patients were suspected of having a peptic ulcer or had been treated for peptic ulcer. These patients usually had taken milk or a milk and cream mixture, a food which is very high in calcium content. Farley, et al,<sup>16</sup> recommended that the arthritic patient drink liberal amounts of milk while taking vitamin D. It has been well established that hypercalcemia is dependent upon the amount of calcium in the diet.<sup>17,18,19</sup> Jones<sup>11</sup> added one unit of vitamin D per gram to a diet low in phosphorus and high in calcium, and was able to produce pronounced hypercalcemia in rats. In many of the cases of hypervitaminosis D which have been reported there was an intake of a quart or more of milk with the vitamin.<sup>4,5,14</sup> If patients who are receiving large amounts of vitamin D are suspected of having an organic lesion of the stomach or duodenum and are treated accordingly, not only will the symptoms be aggravated, but actual tissue damage may occur.<sup>20</sup>

Case 4.—L.B., aged 65, was admitted to the University Hospital January 23, 1945, with congestive heart failure. About a year before she had had coronary occlusion, followed by congestive heart failure. The clinical and electrocardiographic observations at that time had substantiated the diagnosis. She had been hospitalized at that time and had made an uneventful recovery. Shortly after leaving the hospital she had begun taking vitamin D for vague joint pains. At first she had taken only one tablet (50,000 USP units) a day, but gradually increased the dose to eight tablets (400,000 USP units) a day. Shortly after this she had developed nausea, vomiting, and abdominal distress. Soon thereafter she had noticed the onset of shortness of breath on exertion. Suddenly she had an attack of severe nocturnal paroxysmal dyspnea, which was followed by congestive failure. The vitamin D had been discontinued before she entered the hospital.

The patient had a marked shortness of breath and slight cyanosis. The transverse diameter of the heart was enlarged, the cardiac rate was 100 per minute, and the blood pressure 125/100. The cardiac mechanism was normal, but gallop rhythm was present over the apical area. There were signs of effusion in the left pleural sac, and many râles were heard over both lung bases. There were Heberden's nodes and other evidence of a mild degenerative arthritis. A teleroentgenogram revealed some cardiac

enlargement, pulmonary congestion, a small amount of fluid in the left pleural sac, and definite calcification of the aortic knob. The electrocardiogram revealed left axis deviation, inversion of the T waves in lead I, and changes in the precordial lead which were suggestive of myocardial disease. The hemoglobin was 11 grams, the erythrocyte count 4,500,000, and the leukocyte count 11,000. The differential leukocyte count was normal. The blood Kolmer, Kahn, and Kline reactions were negative. The blood urea nitrogen, creatinine, and calcium were normal. The urine had a specific gravity of 1.012; a trace of albumin was present, but no formed elements could be found. The patient made an uneventful recovery on routine cardiac management, and she had no recurrence of symptoms related to vitamin D intoxication.

It is possible that vitamin D was not responsible for the attack of nocturnal paroxysmal dyspnea and the resulting congestive failure in this case. Repeated attacks of coronary occlusion are not unusual, and, since this woman had had a previous occlusion, a second one was to be expected. However, she showed a large area of calcification in the aorta which may have resulted from the hypervitaminosis.

Massive doses of vitamin D may increase the calcium content of any tissue<sup>13</sup> and large deposits of calcium have been found in the arteries, myocardium, lungs, kidneys, stomach, and intercostal muscles of animals which received large amounts of vitamin D. Vascular calcification is confined more to the media, as in the Monckeberg type of sclerosis, than to the intima, as in ordinary arteriosclerosis.<sup>21</sup> Ham<sup>22</sup> found that enormous single doses of vitamin D produced calcification of the aorta, coronary arteries, and cardiac musculature in rats within forty-eight hours after administration. Ross and Graham<sup>24</sup> reported that the death of an infant was caused by hypervitaminosis D, and found calcification in many of the arteries, the cardiac muscle, and the kidneys. In the blood vessels the calcification took place in the inner layers of the media. Ham<sup>22</sup> found that pathologic calcification did not appear in animals when the serum calcium level was rising; however, extensive calcification appeared during the return of serum calcium to normal levels.

Experimental work on animals and the few observations on man indicate the possibility that excessive intake of vitamin D may increase the thickening of the media of the aorta and coronary arteries. If the coronary arteries are already sclerosed, as in Case 4, it is possible that coronary occlusion may be precipitated. Nausea and vomiting may be factors in precipitating occlusion, because of the associated increase in activity. A parallel factor may be the increased coronary flow

resulting from the mental stress accompanying the gastro-intestinal upset. Both of these factors were probably operating in this case.

Case 5.—R.F., aged 38, was admitted to the University Hospital August 29, 1945, because of indigestion, vomiting, headache, arthritis, and "lumps" on the fingers, toes, chest, and neck. Joint pains had been first noted in 1930, and, two years later, a diagnosis of rheumatoid arthritis of the left wrist had been made in the Department of Orthopedics. At that time the urine was negative except for a trace of albumin. Between 1932 and 1936 she had been seen by the orthopedists on six occasions, and, aside from the progressive rheumatoid arthritis, nothing abnormal had been noted. She had had many kinds of treatment, including physiotherapy, fever therapy, and autogenous vaccine. Many "foci of infection" had been removed. About eighteen months prior to admission she had started self medication with vitamin D, taking two to three capsules (50,000 USP units each) per day. Soon after this she had noticed constipation, headache, epigastric fullness, nausea, and vomiting. The symptoms had persisted for several days at a time, and recurred every one or two weeks; between the attacks there had been no distress, and her appetite had been good. There had been no precipitating factors, and relief had not been obtained from taking soda or milk of magnesia. Polyuria and polydipsia had not occurred. Her weight had remained constant, averaging about 110 pounds. About a month before admission she had noticed a mass at the back of her neck. Other masses had soon appeared over the sternum, fingers, and toes, but had not been painful or red. She had not had chills or fever.

The important abnormalities included fusiform swelling of the fingers, ulnar deviation, and the anky-

losis of rheumatoid arthritis. A firm, smooth, non-tender, slightly movable mass, about 4 x 2 centimeters, was present posteriorly over the right side of the neck. Over the sternum, at the level of the second rib, there was a superficial, fluctuant, round, non-tender, fixed nodule about 1 centimeter in diameter. The skin was slightly bronze in color, and the mucous membranes appeared pale. There was marked atrophy of the muscles of the extremities. Juxta-articular nodes were present over the fingers and toes. The blood pressure was 120/80.

The laboratory data are outlined in Table I. The electrocardiogram was normal. Roentgenologic studies revealed a normal gastro-intestinal tract and a normal genito-urinary tract. In addition, the lungs were normal except for a few calcified nodules in both bases. Many areas of calcification were present in the regions of both shoulders and axillae. The heart and great vessels were normal. Both tables of the skull were normal, and no areas of decalcification were found. A very small area of calcification was noted just above the sella turcica. The right shoulder and wrist revealed evidence of an extensive rheumatoid arthritis, characterized by calcium deposits in the joints and calcified nodes in the soft tissues. An irregular, amorphous mass of calcium deposit, 4 x 2 centimeters, was present in the soft tissues of the right side of the neck. The left femur showed marked atrophy, especially in the region of

TABLE II  
Composition of Aspirated Material from Nodule in Case 5

	9/5/45	1/19/46
Calcium .....	2.12 (gm. per 100 cc.)	1.602
Phosphorus .....	0.78 (gm. per 100 cc.)	0.74
Mucine .....		7.0 mg.
Uric Acid .....		0
Murexide Test .....		
P:Ca ratio .....	2.7	Normal P:Ca ratio 2.4 2.1

TABLE I Laboratory Findings in Case 5			
Urine	9/5/45	9/26/45	1/19/46
Specific Gravity.....	1.002	1.007	1.004
Albumin .....	1+	1+	negative
Casts .....	hyaline	hyaline	none
Leukocytes .....	few	few	few
Concentration Test (maximum Sp. Gr.) .....	1.008		1.005
Calcium (mg/24 hr.).....	392		340
Blood			
Hemoglobin (Gm.) .....	8.0	8.8	9.2
R.B.C. (million/cu.mm.) ..	3.1	2.8	3.1
W.B.C. (thousand/cu.mm.) ..	7.2	7.0	6.4
Serology (Kline, Kolmer, Kahn) .....	negative		negative
Urea Nitrogen (mg. per 100 cc.) .....	52.5	46.2	37.1
Creatinine (mg. per 100 cc.) ..	2.7	3.6	2.4
Chlorides (mg. per 100 cc.) ..	645.0		
Sedimentation Rate (Wester-gren Method) .....			90 mm. in 60 min.
Serum			
Calcium (mg. per 100 cc.) ..	13.5	12.3	13.0
Phosphorus (mg. per 100 cc.) ..	5.7	5.7	5.8
Phosphatase (units per 100 cc.)* .....	5.0	5.0	4.2
Plasma			
Albumin (gm. per 100 cc.) ..			4.5
Globulin (gm. per 100 cc.) ..			2.0
Total proteins (gm. per 100 cc.) .....			6.97
CO <sub>2</sub> combining power (Volume %)	56.0		61.0
Urea Clearance (% of normal) 16			12

\*Jenner-Kay units

the knee joint. A small area of calcium deposit was present in the lateral part of the lower thigh. There was extensive rheumatoid arthritis of the left hip, with destruction of the acetabulum and the head of the femur. A few calcified nodules were seen in the soft tissues. Several of the nodules were aspirated, and a thick, mucinous, white material was obtained (Table II). Bacteriologic studies failed to show any tubercle bacilli.

During her hospital stay the patient was able to take the regular hospital diet without nausea or vomiting. She was told not to take any more vitamin D, to reduce her intake of milk, and to drink at least five quarts of water daily.

This patient was readmitted to the hospital January 16, 1946. After leaving the hospital a few of the masses had disappeared; however, two others had appeared, one over the manubrium and one on the index finger of the left hand. She had gained some weight, had had a good appetite, and had vomited only four times. Physical examination was the same as on her previous admission except for the changes in the number and distribution of the nodules. The electrocardiogram, including the precordial lead, was normal. Roentgenograms showed an increased depo-



sition of calcium in the bones and a decreased amount in the soft tissues. Table I shows the results of the blood and urine examinations. Several nodules were aspirated, and thick, white, opaque, mucinous material was recovered. Chemical analysis of this material showed that it contained both calcium and phosphorus in the same ratio as that found in normal bone<sup>4</sup> (Table II).

The conjunctivae of each eye were roughened by numerous little bleb-like excrescences, each of which contained an irregular whitish mass which appeared to be calcium. The roughening and calcium deposition were confined to the interpalpebral fissure area of the bulbar conjunctiva. In the periphery of the cornea, approximately 1 millimeter from the limbus, there was a white, band-like infiltrate which had the appearance of a beginning zonular dystrophy. The fundi were normal except for slight constriction of the peripheral arterioles.

This patient had all the toxic manifestations of hypervitaminosis D, including demineralization of the long bones, metastatic calcification in the soft tissues, renal insufficiency, and nitrogen retention. In many instances the renal damage may be reversible if the drug is discontinued in time, but in this case the damage appeared to be permanent. The urea clearance was only 16 per cent of normal, and it remained at this level; the continued retention of urea nitrogen and creatinine in the blood indicated that the damage was irreversible.

The question arises whether or not the metastatic calcification in this case could have resulted from hypervitaminosis per se. Deposition of calcium in the soft tissues has been produced experimentally, in animals, by the administration of various forms of irradiated ergosterol.<sup>13,21,22,24</sup> Shelling and Asher<sup>21</sup> stated that the hypercalcemia produced by viosterol favors metastatic calcification. Such changes may be facilitated by the local tissue injury already present or may be produced by vitamin D itself. Cases similar to this have been reported by Danowski, et al.,<sup>5</sup> Freeman, et al.,<sup>4</sup> and Wells and Holley.<sup>25</sup> The case presented by Wells and Holley is of interest in that the metastatic calcification occurred in a patient with osteitis deformans (Paget's disease of the bone). Wells and Holley stated, "It would appear that calcium is more easily mobilized from the bones in Paget's disease than in normal persons . . . it would seem natural to expect that massive doses of vitamin D would lead to more diffuse calcification in patients with Paget's disease than in normals."

The sequence of events leading to the abnormalities in Case 5 can be summarized in the following manner. The massive dose of vitamin D, enhanced by the high calcium intake in the form of milk, resulted in hypercalcemia. This increase in blood calcium caused the vomiting, headache, and abdominal distress.<sup>20</sup> When vomiting became severe the patient stopped taking the vitamin,

which relieved the gastro-intestinal complaints. She would then resume taking vitamin D, causing these symptoms to recur. To compensate for the increase in serum calcium, the kidney was forced to eliminate an excess of urine of low specific gravity. The deposition of calcium in the kidneys finally resulted in tubular nephritis which, up to the present time, appears to be permanent. The continued use of the vitamin caused a demineralization of the long bones. The excess of calcium and phosphorus which was unable to pass through the tubular epithelium of the kidney was deposited in the soft tissues as nodules and in the skin as collections of milky fluid. Both the conjunctiva and cornea are sensitive to ultraviolet irradiation, and this may account for the deposition of calcium in these structures. The rheumatoid arthritis was not ameliorated or made worse by any of these abnormal changes.

TABLE III  
Results of Five-day Calcium Retention Study  
(Ingested 5000 cc. of fluid daily including 720 cc. of milk)

	Calcium/24 hr.	Phosphorus/24 hr.	Nitrogen/24 hr.
Intake .....	1.093 gm.	1.293 gm.	12.86 gm.
Urine .....	0.434	0.852	9.97
Feces .....	0.407	0.291	0.77
Total excretion .....	0.841	1.143	10.74
Total retention .....	0.252	0.150	2.12
Retention/Kg .....	0.007	0.004	0.062

Ca. Urine  
Ca. Intake

40%

In hyperparathyroidism fecal calcium usually equals or exceeds intake. This patient shows excellent absorption (+60% of intake, average about +20%). Data suggest recovery and decalcification proceeding despite continuance of excessive urinary calcium.

The possibility of hyperparathyroidism might be considered because of the calcified nodules in the soft tissue. In hyperparathyroidism there are general weakness, flabbiness of the muscles, loss of tone, and muscular incoordination. The blood calcium is high, the blood phosphorus low, and the phosphatase level is usually high. Hyperparathyroidism is also characterized by multiple cysts, giant-cell tumors, and demineralization of the bones to a degree resulting in deformity of the skeleton. None of these changes were present in Case 5. In hyperparathyroidism the fecal calcium usually equals or exceeds the daily intake. Table III gives the results of a five-day calcium retention study, showing that the patient's fecal calcium was less than half her calcium intake, and that she had excellent absorption of calcium (60 per cent of intake).

Since the original work of Dreyer and Reed, there has been considerable discussion concerning the efficacy of massive doses of vitamin D in arthritis. Many authors have noted improvement, ranging from 20 to 100 per cent.<sup>2,26,27,28,29,30</sup> Comroe<sup>31</sup> has critically reviewed the evidence for

and against the use of vitamin D, and has concluded that there is no rationale for its use. The American Rheumatism Association<sup>32</sup> stated that the therapeutic effects of large doses of vitamin D are of doubtful value in the treatment of arthritis. Freyberg,<sup>33</sup> in a careful experiment, followed 36 patients on a vitamin D regime for a period of two to three years. Only 14 of the 36 were considered to have shown subjective improvement. He concluded that "the data would not support the contention that great benefit results from vitamin D therapy, although some persons seem to show improvement, at least subjectively and not on a psychogenic basis, when receiving high dosage vitamin D therapy." In the cases reported in this series only one patient (Case 3) had subjective relief while taking this drug. In Case 5 there was no relief from joint symptoms, and the erythrocyte sedimentation rate was still greatly increased. In evaluating any drug in the treatment of arthritis it must be remembered that relief can be obtained in a certain number of cases with anything. This was aptly stated by one of the editors of the Rheumatism Review when he asked, "Is this the inevitable 60% who improve under almost any treatment?"<sup>34</sup>

No attempt was made in this series of cases to report the brand of vitamin D used by the patients. Snyder, et al.,<sup>29</sup> reported the use of vitamin D prepared by the Whittier Method (ertron). They stated that no deaths had occurred and no evidence of toxicity had been observed. In contradistinction to this study, Freyberg<sup>33</sup> found that 16 per cent of his patients had to discontinue ertron because of its toxicity; Boots<sup>35</sup> also observed toxic manifestations in 18 of 31 cases. One of the patients reported by Danowski, et al.,<sup>5</sup> and two by Freeman, et al.,<sup>4</sup> developed severe toxic symptoms while on ertron therapy. Other forms of vitamin D, also, may be toxic. Jones<sup>11</sup> produced hypercalcemia in rats with irradiated ergosterol, pure calciferol, and irradiated 7-dehydrocholesterol. Hypervitaminosis D was also produced with delsterol (irradiated animal sterols, D<sub>2</sub>) and tuna liver oil (chiefly D<sub>2</sub>).<sup>36</sup> No attempt was made to review the literature concerning vigantol, because this substance contains considerable toxisterol, a substance very injurious to animal tissues. Several deaths have been reported from high vitamin D therapy; one of the patients was 18 months old.<sup>23, 37, 7</sup> The daily requirement of vitamin D for an adult is 400 USP units, but the lethal dose is not known. Spies and Hanzal<sup>38</sup> gave the largest recorded doses to patients who were about to die of disease; the maximum dosage was over 18,000,000 international units per day, or more than 6,000 times the ordinary doses which cause pathologic

calcification of tissues. Bills<sup>3</sup> contended that the margin between the ordinary and the toxic doses is less for man than for the rat. Ordinarily, the dose of vitamin D is prescribed according to age, rather than body weight. Lewis<sup>39</sup> has shown that vitamin D, when given in milk, has ten times the potency of the same amount in oil. Therefore, giving 5,000 USP units to a child in milk represents an enormous dosage. In Case 5 the patient, who weighed only 110 pounds, took 150,000 USP units a day. Most of the time this patient consumed milk with the drug, increasing the potency to a total of 1,500,000 USP units per day, or 13,636 USP units per pound of body weight per day. It is important, therefore, that vitamin D be prescribed in terms of body weight, rather than in terms of age.

#### CONCLUSIONS

1. Large doses of vitamin D may cause severe hypervitaminosis.
2. Hypervitaminosis D occurs more readily with a high calcium intake, especially milk.
3. The total dose of vitamin D which may cause toxicity varies greatly. The dose of vitamin D should be based on body weight, rather than age, and whether or not it is given in milk.
4. The usual toxic symptoms of vitamin D administration are headache, nausea, vomiting, diarrhea, epigastric fullness, polyuria, and polydipsia. The signs of toxicity are low specific gravity of the urine, traces of albumin in the urine, inability to concentrate urine, increased serum calcium, renal failure, retention of non-protein nitrogen, deposition of calcium in soft tissues, deposition of calcium in arteries and arterioles, and, eventually, death.
5. Massive doses of vitamin D do not alter the ultimate course of arthritis, and the value of this drug in this disease is questioned.
6. Whenever massive doses of vitamin D are prescribed, the urine should be examined frequently and serum calcium levels should be obtained.

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## ANALGESIA AND ANALGESIC AGENTS

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The pharmacologist's interest in analgesia and analgesic agents has been greatly stimulated during the last few years. This interest is due to the introduction of better methods for quantitating the potency of these agents in both man and animals. While a great deal is still to be desired in the total analysis of their effect, at least reproducible methods are now available for measuring pain perception thresholds. Pain perception, like all subjective experience, is relatively difficult to measure. Recognized analgesic agents are a heterogeneous group of compounds and many of them are wholly unrelated chemically. It is impossible to predict from chemical structure whether or not an agent will possess pain relieving properties. The presence of sedative and hypnotic properties does not necessarily indicate that an agent will have analgesic action. Sleep tends to decrease sensory phenomena, but the barbiturates, chloral hydrate, and bromides are not considered to possess very much analgesic action. In fact, these agents should be avoided in the presence of marked pain. It is only by careful analgesic studies that one can expect to find new potent pain-relieving agents. The analgesic agents, known at present, are few in number and not too efficient. Often the results obtained from their use are not all that may be desired and the few highly efficient agents produce many undesirable side actions such as nausea, depression, and addiction.

Pain is undoubtedly the most common symptom which brings the patient to the doctor. Adequate control of pain symptoms frequently taxes the resources of the physician. If it is remembered that pain is a symptom and not a disease, then each case of pain is an individual problem, requiring proper appraisal as to the correct agent to be used, proper dosage, and duration of treatment. The administration of an analgesic agent without determining the underlying cause of the pain is poor therapy. Once the pain is relieved many important etiologic factors may be missed. Even after the underlying cause has been determined, considerable judgment is required in selecting the proper agent for the particular case on hand. There is no universal analgesic agent adaptable for all painful conditions.

The production of analgesia involves several possible points of action: the pain receptors, the sensory pathways, the centers of pain perception, and the mental processes. Drugs, systemically administered, exert little or no effect on the pain

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receptors, because it is probably impossible to attain a sufficient concentration of the drug at the site of the receptors. Drugs such as the local anesthetics, however, can be administered at the endings of sensory nerves in localized areas in sufficient concentration to affect the sensory receptors. Several drugs which are ordinarily not considered as analgesic agents may prevent the rise in sensory stimulation of pain receptors on a more fundamental level. These drugs may effect pain relief by relaxing smooth muscle. Examples are the relief of angina pectoris by nitrites and the relaxing effect of atropine and many atropine-like compounds in spasms of smooth muscles in various organs.

Pain may be relieved by temporary interruption of the sensory pathways as with procaine, or by permanent interruption of the pathways by alcohol, surgical section, or excision.

The other site of action must be central, either through a reduction in the sensitivity of the pain receptor centers, or through alterations in the mental processes of the patient. The sensation produced by a painful stimulus is determined to a large extent by the attitude toward the cause of the pain. If there is no anxiety or worry relative to the cause, or if the patient's mind is preoccupied, pain is well tolerated and may even be ignored. On the other hand, when there is anxiety, worry, and no distraction, pain is less easily tolerated.

Knowledge of the mechanisms of actions of analgesic drugs has been greatly enhanced by the contributions of Wolff, Hardy, Goodell and their associates. These authors have devised a suitable method for quantitating pain threshold and have carefully analyzed a number of factors which play a role in the effectiveness of various pain relieving agents.

The method recommended by these workers consists in focusing a beam of light from a 1,000 watt bulb on the blackened foreheads of the subjects. The intensity of the radiation was varied by means of a rheostat until the subject perceived a painful sensation, as distinct from heat, at the end of the exposure. This intensity was then measured radiometrically in gm. cals/sec/cm<sup>2</sup> and was defined as the pain threshold. This threshold was observed to be constant and independent of the emotional and physical state of the subject. The intensity of the stimulus required to produce pain was the same regardless of the size of the skin area stimulation, and consequently there was no summation effect. The method has been adapted to the study of analgesia in animals by using a muscle reflex twitch as the end point. Various other methods have been used in

measuring pain perception and a critical review of the existing methods has been published by Goetzl, Burrill, and Ivy. The method of Hardy, Wolff, and Goodell appears to be the most popular, and many publications are appearing in the literature relative to analgesic drugs.

Some very interesting results and views are recorded in the several papers published by Wolff, Hardy, and co-workers. These authors found that the threshold for pain perception was increased in varying degrees by all the common analgesic agents. A maximum effect or ceiling was observed for each drug studied. Additional amounts did not raise the threshold ceiling further, although the duration of effect was somewhat prolonged. It is evident from these findings that there is little value in administering doses beyond the maximum threshold dose, at least for those agents which exert their analgesic effect chiefly by raising the threshold of pain perception. For example, 0.3 gram of aspirin raised the threshold to approximately the same degree as did 0.6 gram. The duration was somewhat longer with the larger amount, but a more constant effective level was obtained by 0.3 gram at two hour intervals as compared to 0.6 gram given every three hours (see graphs).

Using the threshold rise of morphine as 100 per cent, these authors have determined the dosage effect in producing the maximum threshold rise. The findings for some of the agents are shown in Table 1. These figures furnish information relative to the optimal dosage, time of peak effect, and duration. The advantage of proper dosage intervals to obtain the most constant effective level is well demonstrated in the two curves of aspirin administration.

TABLE I

Drug	Maximum Threshold Raising Effect %	Dose	Duration Hours
Morphine .....	100	30 mgms.	7.5
Morphine .....	70	15 mgms.	7.0
Dilaudid .....	105	3 mgms.	6.25
Codeine .....	50	60 mgms.	5.0
Alcohol .....	40	30 cc.	3.0
Aspirin .....	35	0.3 gm.	4.5
Acetophenetidin .....	33	0.3 gm.	3.0
Acetanilid .....	30	0.3 gm.	3.0
Combination of Aspirin .....	30	0.3 gm. each	5.5
Acetophenetidin .....			
Acetanilid .....			

Peak effects were usually reached in about 90 minutes; exception to this was alcohol, 30 minutes for peak effect, and the 30 mgms. dose of morphine, 150 minutes.

No synergistic effects could be demonstrated when various mixtures of analgesic agents were tried. The maximum threshold effect was that of the most effective component, but such effects as sedation and hypnosis may be additive. In studying the effect of alcohol alone and alcohol and aspirin, the authors found a ceiling effect for alcohol at about 30 cubic centimeters. The action was



prompt but the duration was shorter than for most other analgesic drugs. A combination of alcohol and aspirin produced a prompt threshold rise, with the maximum effect being that of alcohol, but the duration was prolonged due to the presence of aspirin. Such a combination was recommended for pain relief.

The action of morphine on pain perception was studied in considerable detail, and these studies led the authors to some important conclusions. Morphine raised the threshold of pain perception in the normal individual, but when a constant source of pain was applied for forty minutes before the drug, 15 milligrams of morphine had only a negligible effect. Some mechanism other than threshold effect must operate.

It has long been recognized that constant pain is alleviated by morphine, but that a suddenly introduced stimulus makes the individual feel the new pain as keenly as if no morphine were present. In order to explain this fact and several others including the failure of threshold effect in the presence of pain, the authors considered the

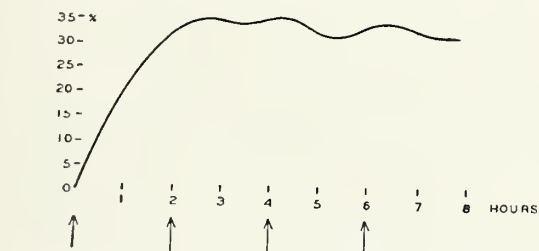


Fig. 1. The effect on the pain threshold of repeated ingestions of acetylsalicylic acid 0.3 gram at two hour intervals (two subjects).

effect of the opiates under three categories: (1) the threshold raising action, (2) the property of dissociating pain perception and its implications, and (3) the property of inducing lethargy and sleep.

In view of their findings, the threshold effect would be of importance chiefly when morphine is given prior to onset of pain as it is used in surgery; that is, to prevent subsequent pain. During severe pain of long duration, however, the threshold elevating effect is practically negligible and the therapeutic potency of the drug lies in its effect on the reaction pattern to pain. The opiate alters the usual withdrawal flight, fight, and anxiety reaction pattern of pain to a pattern of indifference. The third action probably is not too important in itself. It is known that the hypnotics produce lethargy and sleep but have little analgesic activity. However, lethargy and sleep may aid in the analgesic activity when combined with freedom from anxiety and worry.

The failure of an analgesic drug to relieve pain

consistently may then be due to the difference in the patient's mental state or perhaps to variations of the drug in altering the mental state or pain pattern of the individual. A drug which produces an euphoric state will alter the pain reaction in the individual with an anxiety mental state much more than when the mental state influence is small in comparison to the intensity of the painful stimuli. Thus two drugs may alter the threshold of pain perception to the same degree, yet one may effect a greater influence on the pain pattern, and be greatly superior in abolishing the pain. The narcotics have the greatest effect on the pain pattern and it might appear from deduction that euphoria and efficient analgesia go hand in hand.

Pain may even act as an antidote to the more powerful opiates. This is well recognized in cases where morphine is administered in rather large doses for its analgesic action. Such an individual may have little depression while his pain persists, but if the pain should abruptly cease, the patient may have severe morphine poisoning. It is also probably more difficult to develop morphine addiction in the presence of pain. It becomes apparent, therefore, that in considering analgesic drugs and their actions, emphasis on their mechanism of action must be placed on their ability to alter the mental state of the patient, and the threshold raising property is probably only secondary. Under the influence of certain analgesic drugs, a patient may state that the pain is still there, but that he does not feel it. This can be explained only on the basis of alteration of the mental processes of the patient and not to raising the perception threshold.

The role of epinephrine as related to analgesia affords interesting speculations. Wolff and co-workers found that pain itself tended to raise the threshold for pain perception. They also observed that following epinephrine administration the threshold rise for 15 milligrams of morphine was about 25 per cent instead of 70 per cent as obtained in normal subjects. In addition the duration effect was greatly shortened. The authors believe that epinephrine acts centrally by decreasing the sensitivity of pain perception. Recently Parson and Goetzl have demonstrated the effect of induced pain on the threshold. They further observed that the analgesic effect of induced pain outlasted the painful stimulus from ninety to one hundred twenty minutes. Because pain is known to cause an outpouring of epinephrine from the adrenal glands, the authors suggest that epinephrine might be the agent involved in producing analgesic effects following induced pain.

Variations in response to painful stimuli using a roughened metal under a blood pressure cuff

have been demonstrated by Hollander. His patients were divided into three groups: hypersensitive, normally sensitive, and hyposensitive. Using the same technic, Wilder was able to detect difference between functional disease and organic disease. The patients with functional disease had a greater average sensitivity to pain. The pain threshold for men was found to be higher than that for women. Schumacher, Goodell, Hardy and Wolff, after studying 150 individuals, concluded that the pain threshold in man is relatively stable and uniform, but that there are wide individual variations occurring in the reaction to pain dependent upon individual experiences and attitude.

The common analgesic agents may be classified roughly in two groups:

A. The Threshold Agents	B. Those Acting by Special Mechanism
Morphine	Ergotamine tartrate
Dilaudid	Benzedrine
Codeine	Trichlorethylene
Pantopon	Caffeine
Demerol	
Salicylates	
Acetanilid	
Acetophenetidin	
Antipyrine	
Aminopyrine	
Cinchophen	
Neocinchophen	

Most of the general anesthetics have a great deal of analgesic action, but they are not included in this list, since they are used chiefly to prevent pain during surgery rather than to relieve existing pain. Those peripheral acting drugs such as nitrates, atropine, and the xanthines, which prevent the rise in stimuli at the pain receptors in muscle spasms, are not included, although in these specific instances they are just as efficient as the more commonly accepted analgesic agents. However, the mechanism of action is entirely different.

The opiates stand at the head of the list of analgesic agents, and morphine is the most commonly used opiate. It has a highly selective action against pain, and is far more effective against continuous pain than against sharp intermittent pain. It will obtund most types of pain, although the lightning pains in the patient with tabes dorsalis are quite resistant. As stated previously, the relief by morphine is mainly in altering the patient's mental attitude rather than raising the pain threshold. Greater dosage is necessary to control existing pain than is needed to prevent subsequent pain as from surgery. If large doses

are used, one should always be on the guard for development of severe morphine depression if the pain should abruptly cease. There are many indispensable uses of morphine, but it should be employed only when less potent analgesics are inadequate. Nausea, constipation, and liability to addiction are side effects of morphine which will be encountered when this drug is used.

Dilaudid, or dihydromorphinone, is a derivative of morphine. This agent is definitely more analgesic than morphine, but the duration of action is shorter, and it is less somnifacient. It is claimed that it produces less nausea, vomiting, and constipation. Tolerance and addiction occur with the drug about as rapidly as with morphine. In fact, the shorter duration of action and the more frequent administration of the drug to control chronic pain favor a more rapid dependence on dilaudid than on morphine. This drug is especially useful in certain patients who do not tolerate morphine well and also in situations in which it is desired to secure maximum pain relief with a minimum of hypnotic action.

Codeine is methyl morphine and is a much weaker analgesic agent than morphine. It has an analgesic effect one-sixth that of morphine and is approximately one-fourth as potent in producing subjective and respiratory depression. Doses above the optimum of 60 milligrams may produce excitement. Nausea, vomiting, and constipation are much less evident than after morphine. While codeine may produce tolerance and addiction, it is seldom used by the drug addict because it does not produce the desirable degree of euphoria. It should be used in place of morphine or dilaudid in all cases where the stronger opiate is not needed.

Pantopon is a mixture of the purified alkaloids of opium. Its action is chiefly that of morphine, and claims that fewer side reactions occur are not substantiated.

Demerol is a relatively new synthetic analgesic drug. It is narcotic in action, but in chemical structure it is related to atropine. It possesses three main actions: analgesia, sedation, and spasmolysis. Thus it possesses both morphine-like and atropine-like properties. The spasmolytic action of demerol is due, probably, partly to depression of the cholinergic receptors and partly to a direct depression of muscle fibers. Therapeutic doses produce a slight sedative and rather potent analgesic action which persists for three to six hours. In man, the analgesic effect appears to be between that of morphine and codeine. Occasionally the drug produces euphoria, and evidence points to the fact that the drug may produce addiction. Its legal control is the same as for the opiates. The



drug may be administered orally, but the results are less satisfactory than those obtained from parenteral injections. The spasmolytic properties do not permit the production of constipation.

Alcohol might be added to the list of analgesic agents because it produces both analgesia and hypnosis. While it has been recommended for its pain relieving properties, especially combined with aspirin, it is not popularly used for this purpose.

The opiates, demerol, and alcohol, then, comprise that group of drugs which tends toward an euphoric state, and they probably exert the greatest effect on the mental state of patients with pain.

The remainder of the list of threshold raising agents are represented by compounds that exert two properties in common; namely, analgesia and

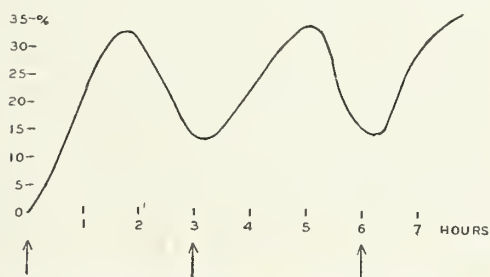


Fig. 2. The effect on the pain threshold of repeated ingestions of acetylsalicylic acid 0.6 gram at three hour intervals (two subjects).

antipyresis. They exert poor analgesic action when the pain is visceral or traumatic in nature. They are valuable agents in the relief of certain types of pain, such as headaches, and those arising from muscles and joints. The mode of action is not entirely clear, but is probably central. There is no noticeable dulling of consciousness or of special sense perception with therapeutic doses, although large doses have been reported to decrease mental efficiency. They are used widely in the nonspecific types of pain such as headaches, neuralgias, myalgias, and arthritis. The salicylates, which are especially useful in the treatment of acute rheumatic fever, are the safer drugs of the group to use, but all may produce severe toxic symptoms. Aminopyrine is capable of producing agranulocytosis and must be used with caution. Cincophen and neocincophen may produce severe liver damage in addition to all the symptoms of salicylism.

In the second group of drugs, perhaps the most important agent is ergotamine tartrate, which is a highly efficient agent in the treatment of migraine headache. This drug is not sedative and does not affect the threshold of pain perception, and has no effect against other types of pain or

non-migraine headaches. The mode of action is believed to be that of vasoconstriction and a decrease in the pulsations of the cerebral vessels. Administration must be either subcutaneous or intramuscular for greatest efficiency. Oral administration is much less efficient due to poor absorption from the gastro-intestinal tract. The smallest effective dose should be employed, since overdosage is the chief cause of untoward symptoms. Migraine may be more easily relieved by the drug if given in the prodromal stage than after a peak has been reached. The drug cannot be given prophylactically due to danger of ergotism. Efficient relief, but not cure, is obtained in about 90 per cent of migraine headaches.

Ergonovine has also found considerable success in this condition, but the percentage of reliefs is not as high as with ergotamine. It may be given orally, and untoward symptoms are not as prominent. Patients obtaining relief from this drug prefer it to ergotamine.

Benzedrine and ephedrine have also been used in migraine. The mechanism of action is probably the same as for ergotamine. The relief following these latter drugs is not as marked as that obtained after ergotamine.

Caffeine is extensively used in combination with analgesic drugs in the treatment of headaches. The mode of action of caffeine in these mixtures is not clear. Caffeine alone often makes pain felt more keenly. Its beneficial action in mixtures may be related to cerebral vascular changes.

Trichlorethylene is a colorless, volatile liquid having the formula of  $\text{CHCl}_3$ . Its action was found accidentally. The material is used as a solvent in the airplane industry, and it was noticed that patients poisoned by this substance developed anesthesia about the face. The compound develops an increased threshold for all types of pain about the face and exerts a high specificity of action against trigeminal neuralgia. The action is probably due to the central depressant action of the drug, but permanency of action as reported by some persons is difficult to explain on this basis. It is administered by inhalation.

In conclusion, it may be stated that there are few specific analgesic agents; that these drugs, like the patient's confidence in his physician, act primarily on mental attitude; and that the raising of the threshold of pain perception is of lesser importance.

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## THE SIGNIFICANCE OF VAGINAL BLEEDING

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Vaginal bleeding is a common gynecologic symptom. It embraces the entire field of gynecology, but when considered in its broader aspects it is not so complicated, since there are only two main sources of vaginal bleeding. Either the bleeding comes from a relatively normal endometrium or from an organic lesion.

There are few genital lesions that can bleed in themselves. A malignancy anywhere along the genital tract from the tube to the vulva may produce a bloody vaginal discharge. Pregnancy membranes, such as placenta or degenerating decidua, often give rise to vaginal bleeding. Polyps either through increased vascularity or by becoming necrotic near their tips produce bleeding. Polyps which cause vaginal bleeding are those arising from the endometrium or endocervix, and rarely those which are submucous pedunculated fibroids. Benign ulcerations, such as those due to infections, those resulting from prolapse and pessaries, and those developing in atrophic vulvovaginitis, may bleed. Thus, there are only four types of organic lesions capable of bleeding; namely, malignancies, polyps, pregnancy membranes, and benign ulcerations. Bleeding from an organic lesion is almost always irregular and seldom assumes a cyclic form.

Much of the vaginal bleeding seen in women comes from the normal endometrium. Bleeding occurs when the endometrium is sufficiently stimulated with certain hormones. The hormone most responsible for endometrial bleeding is estrogen. This type of vaginal bleeding may be called hormonal bleeding.

Hormonal bleeding is ovulatory when the endometrium has undergone progestational changes. In the normal menstrual cycle the gonadotrophic hormone from the anterior pituitary gland stimu-

lates the development of a graafian follicle in the ovary. Estrogen produced by this follicle causes the endometrium to proliferate. In the midperiod of a cycle ovulation occurs and a corpus luteum develops in the collapsed follicle. This body produces estrogen which causes further proliferation and progesterin which induces certain secretory changes in the endometrium which is recognized<sup>1</sup> as the best evidence of ovulation. If the ovum is not fertilized, the corpus luteum degenerates and the endometrium breaks up and is shed to a great extent. The bloody discharge which accompanies this shedding is designated ovulatory flowing. This type of vaginal bleeding is usually cyclic, lasts five to seven days, is seldom profuse, and is often associated with cramps.

In certain cycles the follicle develops but does not rupture. The endometrium proliferates but shows none of the progestational changes seen following ovulation. The follicle soon undergoes regression and ceases to produce estrogen. This fall in estrogen titer makes the endometrium bleed but there is little shedding of tissue. This anovulatory flowing is often acyclic in nature, profuse, and is rarely associated with cramps. If the follicle persists as a secreting structure, the endometrial bleeding is delayed and amenorrhea results.

At the menarche some of the graafian follicles of the ovary begin to mature but there is often failure of ovulation. Much of the flowing around puberty is anovulatory and for this reason irregular menstruation at this period of life is common. By the age of sixteen to eighteen years the ovary is functioning more normally, ovulation is taking place in almost every cycle, and menstruation is normal. At about the age of thirty years the patient begins to have some anovulatory cycles, although most of the cycles will be ovulatory and menstruation will be fairly normal. At forty years<sup>2</sup> most of the cycles will be anovulatory and at fifty all cycles should be considered anovulatory. This explains much of the abnormal flowing around the climacteric. Following pregnancy<sup>3</sup> menstrual flowing is usually anovulatory for several cycles.

Vaginal bleeding is more easily understood clinically if the life of a woman is divided into three periods; namely, before puberty, puberty to menopause, and postmenopausal. All endometrial bleeding in the child before puberty is anovulatory. Vaginal bleeding in the newborn is not uncommon. The child in utero is under a tremendous titer of estrogen produced by the placenta. After birth, the supply of estrogen is suddenly withdrawn and in a few days estrogen withdrawal bleeding often occurs. When gonorrheal vaginitis in children was

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treated with estrogens, enough hormone was occasionally given to produce vaginal bleeding. Granulosa-cell tumors may occur in children and if they produce enough estrogen the child will have vaginal bleeding. The only organic bleeding commonly seen in children is that due to ulcerations from a foreign body or from an infectious process. Malignant tumors or polyps occur rarely in this period of life.

From puberty to menopause most of the bleeding is endometrial but some is due to organic lesions. In this period patients often have more or less continuous flowing. Three groups of conditions must be considered in this type of bleeding. First, malignancies must claim attention, with carcinoma of the cervix the most common lesion. Any patient over the age of twenty must be suspected of having carcinoma of the cervix if she has continuous flowing. If she is over forty, carcinoma of the body of the uterus must be suspected, if the cervix is normal. Carcinoma of the cervix rarely starts before the age of twenty and carcinoma of the body of the uterus before the age of forty years. Any carcinoma of the cervix which is producing continuous flowing should be very evident upon examination. If the cervix is normal, the diagnosis of body carcinoma is best made by curettage.

The second group of conditions which must be considered in continuous flowing are those due to some pregnancy episode. In other words, the mere history of continuous flowing should make one suspicious of an abnormal pregnancy regardless of the elicited story. An incomplete abortion causes vaginal bleeding as long as any placental tissue is retained. The diagnosis frequently cannot be made until curettage is done. Another condition which must occupy the attention is ectopic pregnancy. This is only true if abdominal pain is a prominent feature of the clinical picture. Pregnancy conditions, such as threatened abortion, inevitable abortion, missed abortion, hydatid mole, and chorionepithelioma must be considered but to a lesser extent than incomplete abortion and ectopic pregnancy.

The third group of conditions causing continuous flowing is related to anovulatory menstruation. In a patient with continuous flowing the curettings often show either a simple proliferative or hyperplastic endometrium. In other words, ovulation has not taken place because of a disturbance of ovarian function. In some patients the endocrine system (the anterior lobe of the pituitary, the thyroid, etc.) which controls the ovaries is at fault, while in others it is the ovary itself. Around puberty the ovary is too immature to function properly and at menopause it is too senile. Ano-

vulatory flowing due to faulty endocrine function is called functional or idiopathic. This type of vaginal bleeding is painless unless the bleeding is profuse or clots have formed.

Some anovulatory flowing is the result of a pelvic lesion which disturbs ovarian function. Pelvic inflammations contiguous to the ovary, such as salpingitis, lead to follicle cyst formation and capsular fibrosis, both of which disturb ovarian function. Patients with inflammations in and about the ovaries sooner or later develop irregular bleeding. Endometriosis frequently involves the ovaries and chiefly through fibrosis disturbs their function. Bilateral ovarian neoplasms or single ovarian tumors that produce estrogens, such as thecal cell or granulosa-cell tumors, disturb ovarian function. The position of the uterus, whether forward or backward, does not influence ovarian function. Prolapse, relaxations, cervical lesions, and fibroids do not cause ovarian dysfunction.

Disease any place in the body may indirectly influence ovarian function. The ovary functions properly only when the woman's general condition is good. All diseases which greatly influence the general health will affect ovarian function and may lead to abnormal flowing.

Another clinical type of bleeding in this age period is spotting between menstrual periods. This spotting may be endometrial in origin or may be due to some organic lesion, such as malignancies, polyps, and benign ulcerations. Endometrial bleeding which takes the form of spotting is usually anovulatory. This type of bleeding is sometimes seen around the ovulation period of the menstrual cycle.

Most vaginal bleeding that occurs between puberty and the menopause is cyclic or slightly acyclic and comes from a relatively normal endometrium. Endometrial flowing is either ovulatory or anovulatory. The former is usually regular with cycles seldom less than three weeks, with moderate flow lasting normally five to seven days. Anovulatory periods may be quite regular and simulate normal menstruation but are likely to be irregular and are frequently prolonged and profuse. The pattern of anovulatory flowing may vary from regular periods every four weeks to continuous bleeding. Irregular ovulation, the development of follicles without ovulation, and the persistence of follicles as secreting structures, all lead to abnormalities of endometrial flowing. What takes place in the ovary determines the clinical pattern of the bleeding. The end organ, or uterus, has very little to do with the clinical picture of endometrial flowing except as the endometrium is influenced by changes in the ovary. Too much emphasis is placed upon the end organ, the uterus, and not

enough upon the regulator of endometrial function, the ovary.

Some investigators<sup>1, 4</sup> have emphasized the failure of ovulation in functional uterine bleeding. The majority of endometrial biopsies in this condition will show a proliferative endometrium. Seldom in distinctly abnormal bleeding is there a fully developed progestational endometrium which is the best evidence of ovulation. This is particularly true when one excludes the mild progestational and mixed progestational endometriums, which are frequently the result of luteinized follicles and cannot always be considered definite evidence of ovulation. Certain follicles which have failed to rupture and have continued to produce estrogen but not in sufficient quantity to inhibit ovulation may account for some profuse flowing from an altered progestational endometrium. If the ovarian cycle regularly consisted of the maturation and ovulation of one follicle, and the development of a corpus luteum, and if no follicles ever failed to rupture and persisted as secreting structures, one could predict perfectly normal menstruation in the absence of organic lesions.

The medical profession has emphasized uterine fibroids as the cause of vaginal bleeding, although these tumors seldom bleed per se. The only fibroid which in itself will bleed is the submucous nodule in which the tip has become necrotic or the endometrium over the tip has been replaced by granulation tissue. All other fibroids have little influence upon the endometrial flowing stimulated by ovarian hormones. Submucous and intramural fibroids increase the menstruating surface and therefore may increase the amount of menstrual bleeding. Fibroids have nothing to do with the pattern of flowing, since that is determined by ovarian function. The profuse flowing seen in women with fibroids is usually anovulatory. A patient with a fibroid and good ovarian function has quite normal menstruation. The periods usually come every month and last five to seven days. If the fibroid is subserous, it will in no way influence the menstrual periods. A patient who has a fibroid does not flow when the ovaries have been rendered functionless with irradiation or ablated, and does not bleed after the menopause because the ovaries do not produce enough estrogen to bring the endometrium up to the bleeding level. Fibroids are most common between the ages of thirty-five to fifty years when ovarian function is diminishing and producing disturbances of vaginal flowing. A patient with a fibroid has normal menstruation if her ovarian function is good but with poor ovarian function has abnormalities of flowing just as she would have without the tumor. A fibroid may increase the amount of flow by

increasing the menstruating surface and rarely a submucous fibroid polyp may bleed at the tip, but otherwise vaginal bleeding has no relation to fibroids.

The mechanism of estrogenic or anovulatory bleeding is not entirely understood. It requires a certain level of estrogen to maintain a given endometrium. If the estrogen level falls below this maintenance requirement, or if it does not increase with the proliferation of the endometrium, the latter will eventually break down in its superficial zone and bleeding will ensue. In a patient who is having estrogenic bleeding, the flow can be temporarily controlled if the estrogen level is sufficiently increased, but at the new estrogen level, bleeding can be expected soon after the endometrium has responded fully to the elevated estrogen titer. The important factor is the relationship of the degree of proliferation of the endometrium to the level of estrogen.

There is little to offer in the treatment of abnormal functional endometrial bleeding. The results of all endocrine products are unpredictable. Fortunately, ovarian disturbances are usually of a minor nature and are self-correcting<sup>5</sup> in the majority of cases. This explains why so many endocrine products have been advocated for treating abnormalities of bleeding. Almost any therapeutic regimen with any type of endocrine product has produced a certain percentage of good results and poor results. Many so-called cures have been due to spontaneous improvement in ovarian function.

The most simple and effective treatment for improving ovarian function is as follows: The general well-being of the patient must be improved as much as possible. This may mean a correction of diet,<sup>6</sup> the undernourished patient should be given a diet high in protein and vitamins, and the obese patient should be properly reduced. Plenty of sleep and rest is essential. Anemic patients should be treated with iron and blood transfusions if necessary. All conditions which deteriorate the general health should be eliminated. Thyroid extract<sup>6</sup> is the most reliable endocrine product for improving ovarian function. It should be given even to patients whose metabolism is normal. The basal metabolic rate is to be used as an indicator of dosage, not as a criterion for the administration of thyroid. Patients with obvious hyperthyroidism should not be given thyroid extract but all others should be given a trial.

In the treatment of irregular vaginal bleeding, curettage<sup>7</sup> is a valuable procedure. It often reveals an organic process even in what seemed to be functional bleeding. Careful study of the curet-



tings will give a clearer picture of ovarian function than any other available procedure. Removal of the endometrium, especially if it is hyperplastic, produces an immediate hemostatic effect and permits a more normal response of the newly regenerated endometrium to hormones when ovarian function is improved. Frequent curettage is of more value than the long continued and promiscuous use of endocrine products and should be done even in virginal women.

Some patients have very poor ovarian function and no matter what is done they continue to have abnormal bleeding. In the menopausal patient little can be done to improve ovarian function. If bleeding is to be controlled in these patients, the end-organ must be removed (hysterectomy) or ovarian function brought below the bleeding level by irradiation. The only treatments with definitely predictable results are hysterectomy and irradiation. Unfortunately, these cannot be used when childbearing is to be preserved.

After the menopause, almost all bleeding is due to an organic lesion. The postmenopausal patient can have endometrial bleeding only if she is administered estrogens or if she develops an ovarian tumor which produces estrogen. Therefore, it is always wise to consider all postmenopausal bleeding as due to an organic lesion.

Roughly two-thirds of all vaginal bleeding after the menopause is due to malignancies and one-third to benign conditions. The most common malignant lesions are carcinoma of the cervix and carcinoma of the body of the uterus. Carcinoma of the ovary may produce vaginal bleeding by spreading along the lumen of the tube to the uterine cavity, or in some cases by producing enough estrogen to produce endometrial bleeding. Carcinomas of the vulva, vagina, and tube, and sarcomas of the uterus usually give rise to vaginal bleeding.

The common benign lesions which produce postmenopausal bleeding are cervical mucous polyps, endometrial polyps, and benign ulcerations due to prolapse, pessaries, and senile vulvovaginitis.

There may be some disagreement as to when a patient is to be considered postmenopausal. A woman above the age of forty who has had no vaginal bleeding for six months is considered postmenopausal. Moreover, any patient more than fifty-two years of age who is bleeding, regardless of the regularity of the flow should be treated as postmenopausal. All postmenopausal patients who bleed should be thoroughly examined. If examination reveals no malignant lesion in the lower genital tract, diagnostic curettement should be done.

In conclusion, it must be emphasized that every

physician when confronted with a case of abnormal vaginal bleeding should decide whether the bleeding is due to an organic lesion or comes from normal endometrium. Abnormal endometrial bleeding is usually anovulatory in nature and is due to some organic pelvic lesion such as inflammation, endometriosis, or neoplasms disturbing ovarian function, or there is an endocrine imbalance with ovarian failure. If the bleeding is caused by an organic lesion, it is due to one of the following: malignancies, polyps, benign ulcerations, or pregnancy membranes. All postmenopausal bleeding is organic in nature.

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## EPIDEMIC RINGWORM OF THE SCALP IN CHILDREN

RUBEN NOMLAND, M.D.

In the United States, ringworm of the dry, scaling type in the scalp of children is caused in most instances by *Microsporon audouini*. The disorder has been endemic in the larger cities of the United States for decades, occurring chiefly in the slums of the large cities, orphan asylums, and among the similar underprivileged classes. The infection assumed epidemic proportions in 1942 when it increased many fold in New York City. From this focus the epidemic spread widely, at first to the large metropolitan centers throughout the country and later to the smaller cities and villages, especially in the eastern United States. The epidemic was not multicentric, arising from already long established foci in the large cities. There has been, up to the present time, no adequate explanation of why the infection assumed epidemic proportions because, as nearly as can be determined, the cultural characteristics of the organism and the clinical features of the infection are the same as those found in the long resident endemic *Microsporon audouini* infection of the scalp.

The epidemic appeared latest in the non-industrial areas and became of concern to Iowa about

two years ago. As far as is known, the disorder was not present in the state of Iowa previous to the present epidemic. The first case at the University Hospitals was seen in September, 1944, the patient having come from the eastern part of Iowa where the epidemic was already established. Since then about twenty patients, who came chiefly from the larger communities in eastern Iowa, have been seen. The epidemic is now well established in most of the cities in Iowa.

While the present epidemic is the first one in the United States, epidemics have, in the past, been reported from Europe. The first one about 1910 was centered in Paris and spread eastward to Germany, Austria, and beyond. After it subsided, sporadic cases occurred in the larger cities of Germany, but the disorder did not again become epidemic until after the first World War. This epidemic, as is true of the present one in the United States, did not arise from the endemic foci, but from one center and then spread to other areas, especially the large metropolitan centers. After a period of about three years the epidemic disappeared, either because of public health measures and treatment or because of a decrease in the infectiousness of the organism. Fuhs<sup>1</sup> described the epidemic in Vienna in detail and thought that public health measures such as case finding and isolation, plus cure of the infected cases by temporary epilation of the scalp with roentgen rays, caused the epidemic to abate.

A great many articles have appeared in the medical periodicals of the United States regarding the present epidemic, and articles in the daily press and magazines of national distribution have appeared. Many of the larger cities have appointed commissions to study the best way to control the epidemic. The recommendations of the committee in New York<sup>2</sup> are similar to those which Fuhs found successful.

The carrying out of the recommendations given for control of an epidemic of ringworm of the scalp requires the cooperation of the medical profession, public health authorities, school administrative and nursing staffs, and physicians qualified to diagnose and treat this stubborn infection.

Because the disorder is almost entirely limited to children under ten years of age, with the greatest incidence at the age of six to ten, it is up to the school health authorities to find the suspected cases in the schools. This can be done speedily and efficiently by routine check of the school children's scalps by means of filtered ultraviolet light (Wood's light). Lamps of this type are available at moderate expense, the technic of their use is readily learned, and the screening can be done by a school nurse. The filtered ultraviolet light

causes a characteristic greenish fluorescence in the infected hairs and patches, and a presumptive diagnosis of ringworm of the scalp can be made after an examination which takes less than a minute per pupil.

When suspected cases are found by the nurse, the children should be sent to a qualified physician who can confirm the diagnosis by direct microscopic examination of the infected hairs and by culture. Unfortunately, this skill in diagnosis is not easy to acquire and special training of school physicians would probably be necessary.

After the diagnosis of ringworm of the scalp has been proved, contacts, particularly the pre-school children, should be brought in for examination. It would be the duty of the health department to bring in the contacts for examination. Isolation or semi-isolation of the infected child is recommended by most authorities but it is exceedingly difficult to carry out because of the long duration of the disorder, which persists until puberty when it heals spontaneously.

Local treatment has not proved successful in curing the disorder. Observers uniformly report that cure can be obtained by roentgen rays according to the Keinböck-Adamson<sup>3</sup> method which causes temporary epilation of the scalp. A dose of 350 to 400 roentgens focused on five different areas of the scalp will cause epilation that is satisfactory and regrowth will begin in six to twelve weeks. About eighteen patients have had their scalps successfully epilated at the University Hospitals during the present epidemic. In the Vienna epidemic x-ray epilation was successful in over 400 cases and in the present epidemic 4,000 patients have had x-ray epilation in New York City without sequelae. Partial epilation of the patches only, at first recommended by Lewis,<sup>4</sup> has now been abandoned. Thallium acetate in a dose of 8 milligrams per kilo also causes epilation of the scalp and was widely used in endemic cases in the early 1930's, but several deaths resulted from this medication and it was abandoned. It is to be hoped that new and simpler methods will be discovered to be successful but none have yet been found, although a great deal of work has been done during this epidemic. It would seem that x-ray epilation, the only method of cure now known, is not going to be widely enough available to control the present pandemic.

The clinical features of the disease are such that the following case would typify nearly all cases of the infection: The mother of this boy, eight years of age, stated that the condition had appeared three months previously as round, scaling areas with loss of hair in the scalp, which had



slowly increased in size up to the time of examination.

Examination of the scalp revealed several round areas, chiefly on the back of the scalp, that were up to 4 centimeters in diameter (Fig. 1). The

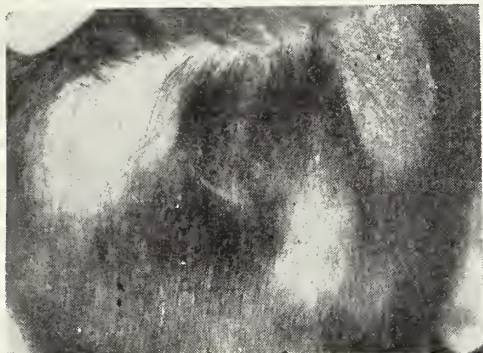


Fig. 1. Dry, scaling patches of ringworm of the scalp due to *Microsporon audouinii*.

areas were not inflamed and scaled lightly. The hairs in the patch were broken off short to give the appearance of incomplete alopecia. On examination with Wood's light the broken off stumps of hair fluoresced with a greenish color and the affected patches stood out distinctly from the adjoining normal scalp. Direct microscopic examination of hairs boiled on a slide with 10 per cent sodium hydroxide showed the typical spores of the *Microsporon* as a sheath around the hair. Culture of the patch revealed no fungi but cultures from his two brothers who also had the infection, showed the infecting organism to be *Microsporon audouinii*.

He was treated by roentgen rays with a dose of 300 roentgens to each of five areas on the scalp (Keinböck-Adamson method) and had satisfactory epilation when seen six weeks later. At this time there was no fluorescence when he was examined by the Wood's light. At the end of twelve weeks there was no evidence of infection and the hair was regrowing.

This case is typical of the infection, showing the dry, scaling, round areas of apparent alopecia. A second type which appears as a diffuse or patchy dandruff-like scaling is fairly common and harder to diagnose but shows the typical fluorescence with the Wood's light and broken off hairs can be found on careful examination. About one third of the cases are atypical and show inflammation which results in healing without resort to temporary x-ray epilation. The common, dry, scaling type lasts until puberty in most of the cases unless the hair is temporarily epilated by roentgen rays.

#### SUMMARY AND CONCLUSIONS

An epidemic of dry, scaling ringworm of the scalp in children has been present in the United States for several years and is now well established in Iowa. The causative organism is *Microsporon audouinii* and it affects children, chiefly of the age group from six to ten years, in a fashion similar to the case described. The disease persists in most children until puberty and can be cured only by temporary x-ray epilation. Control of the epidemic is possible only by cooperation of the health authorities, school administration and health staffs, the medical profession, and physicians specially qualified in diagnosing and treating the infection. Case-finding is done by means of routine examination of school children and the preschool contacts of the ones with suspected infection by means of a Wood's light which causes a characteristic fluorescence of the infected patches in the scalp. Confirmation of the diagnosis in suspected cases and treatment by temporary x-ray epilation will need to be done by physicians qualified to do such work.

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#### COLLEGE OF MEDICINE CLINICOPATHOLOGIC CONFERENCE

January 14, 1946

#### CLINICAL DISCUSSION

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#### ABSTRACT OF CLINICAL HISTORY

This patient was a housewife thirty-eight years of age who had been in the hospital on one previous occasion in 1934. At that time a diagnosis of diffuse toxic goiter was made and, although there is no indication of it in the record, the patient stated that she had a thyroidectomy during her hospital stay. Since then she has had no symptoms referable to the thyroid gland, but during a pregnancy which terminated ten months prior to the last admission she took 0.060 gram thyroid

substance daily. She had not taken thyroid substance in the interim between pregnancies and had been unable to retain it during the pregnancy present on her admission on October 26, 1945.

At this admission she complained of persistent vomiting for the preceding six months, numbness of the hands and feet and pain in the right upper quadrant of her abdomen. Her last menstrual period was in May, 1945, and since that time the patient had been unable to retain food or fluid. Six weeks prior to admission she had noted numbness in her hands, arms, feet and legs, and this numbness had persisted. Six days before admission she had experienced a sharp pain in the right upper quadrant with some extension of the pain across the upper abdomen. The pain was crampy in character but not similar to a labor pain. It was present on admission. The patient had bled

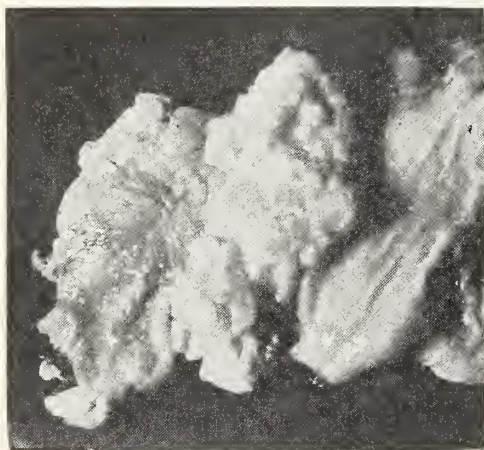


Fig. 1. / Photograph of the bulky carcinoma situated in the distal portion of the stomach.

from the rectum following an enema given about ten days before admission and she had noted tarry stools throughout the present pregnancy. Weakness increased as her pregnancy and vomiting progressed and she had found it necessary to remain in bed for the four weeks preceding entrance to the hospital. The patient stated that her urinary output had been very small and that the urine was dark orange in color. She had not noted swelling of the ankles. She had had three previous pregnancies with living children 15 years, 11 years, and ten months of age. These pregnancies were not complicated by toxemia or persistent vomiting.

Physical examination revealed a pale, ill-appearing woman with a protuberant abdomen. Pertinent findings were limited to the abdomen at the time of admission. There was a tumor filling the lower portion and rising to a point just above the umbilicus. Fetal heart tones could not be distinguished and fetal parts were felt with difficulty.

The patient claimed to have felt movements of the fetus on the day of admission. No tenderness, rigidity, or other masses were palpated in the remainder of the abdomen.

The oral temperature of the patient on admission was 101.6 degrees, the pulse rate was 96, the respiratory rate was 20, and the blood pressure was 95/60. The laboratory findings are listed in the accompanying table.

On October 29 the patient had a convulsion involving the face and arms. During and following the seizure, she uttered wailing cries and made unintelligible sounds. On the same day she had a fluoroscopic examination of the stomach which revealed it to be large, atonic, and filled with gas. A flat film of the abdomen taken after the ingestion of barium "showed a greatly dilated stomach containing retained fluid. No barium passes through the pylorus—. Incidentally there is a late second trimester fetus within the uterus." The impression was "an obstructive lesion of the pylorus with a greatly dilated stomach showing much retained fluid."

A consultation from the obstetric service confirmed the presence of a six months fetus and additional history secured at this time indicated that the pregnancy was unwanted. The patient's fluid intake was maintained by the administration of saline and 5 per cent glucose by the intravenous and subcutaneous routes. She also was given Solu-B and amigen. Wangenstein suction of the stomach contents was instituted on October 29. Daily intake and output were as recorded in the accompanying table of laboratory reports.

On October 31 the patient developed a parotitis which was treated successfully with penicillin and deep roentgen ray therapy and did not require surgical intervention. On November 17 the patient spontaneously delivered a dead fetus which was 32 centimeters long and weighed 780 grams. The uterus contracted readily and there was no excessive hemorrhage. On November 19 a rounded mass was felt in the epigastrium just below the liver margin. The mass seemed expansile and apparently was located more medial than would be expected if it were the gallbladder.

Much difficulty was encountered in maintaining the patient's fluid intake and providing her with sufficient nutrition. She could not tolerate food or fluid by mouth and all nutriment was given parenterally. This included, in addition to the saline and glucose already mentioned, a number of transfusions of blood. The reports of her blood chemistry studies at various times are also recorded in the accompanying table of laboratory reports.

On November 21 the patient complained of shortness of breath, became cyanotic, and lapsed



into temporary unconsciousness about 5:15 p. m. A similar attack occurred about 10:00 p. m. from which the patient also recovered spontaneously. The following day bright red blood was found in the return from the Wangensteen tube and the patient complained of shortness of breath. At about 3:30 p. m. on this day, the patient developed slow gasping respirations and again became very cyanotic. Associated with this was grimacing and clenching of the hands. Respirations ultimately ceased and artificial respiration was instituted. After a time respirations were resumed and the cyanosis receded. The patient remained comatose and unresponsive to pain stimuli. The pulse was weak with a rate of 40 which gradually increased to 60. Although fluids were slowly running at the onset of the episode, the blood pressure was unobtainable at first but after half an hour it returned to the normal for this patient, about 115/70. The intravenous fluids were discontinued. There was some drooping of the right side of the mouth. Fundoscopic examination revealed blurring of the superior half of the nasal side of the right disk and slight "choking" of the left disk.

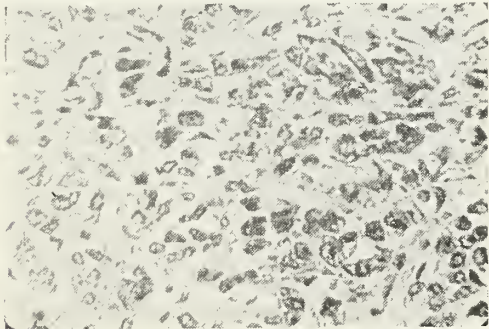


Fig. 2. Photomicrograph of the carcinoma in the stomach, showing lack of differentiation.

A Babinski sign was elicited on the right and a questionable one on the left. At 5:00 p. m. the patient became restless and began to yell very loudly, but at about 5:30 p. m. she began to reply with grunts to questions and would try to drink water. At 8:00 p. m. the patient was alert and complaining of shortness of breath. On November 23 the patient had another attack of apnea at 4:00 a. m. Artificial respiration was successful in restoring regular respirations. Another attack of a similar nature occurred at 10:30 a. m. At 3:45 p. m. the patient was seen in consultation by the neurologic service. It was then noted, in addition to the findings already listed, that the patient had diffuse weakness of the extremities, puffy eyelids, tenderness over the mass in the right upper quadrant. It was recommended that blood phosphorus, calcium and sugar determi-

nations be obtained during the next convulsive seizure. At 4:15 p. m. the patient experienced a convulsion which was severe and from which she did not recover in spite of active resuscitative measures.

LABORATORY REPORTS

	Sp. G.	React.	Albumin	Urine		Blood	Micro
				Sugar	Blood		
10/26	1.015	Alk.	Trace	neg.	neg.		
10/29	1.010	"	Neg.	"	"		
11/17	1.007	"	1 plus	"	"		15-20 WBC's
11/18	1.018	"	1 plus	"	"		8 RBC's/hi field
11/21	qns.	"	trace	"	"		

Blood

	Hemoglobin (grams)	RBC	WBC
10/26	8.7	2,640,000	26,150
10/29	9.0	2,830,000	24,100
11/2	10.0	3,750,000	22,000
11/6	11.4	4,200,000	15,000
11/13	11.4	3,950,000	12,500
11/17	11.8	4,050,000	9,950
11/18	9.0	3,960,000	7,050
11/19	10.2	3,350,000	15,100
11/21	13.0	4,500,000	19,850
11/23	12.7	4,300,000	14,400

Stool

10/26 4 plus quaiac test

Blood Chemistry

	Chlorides	Total Protein	Comb. Power	CO <sub>2</sub>		Urea N.	Creat.
10/29				90	30.8	2.3	
10/30				90	26.6	1.7	
10/31				78	16.8	1.0	
11/2	525			61	8.4		
11/5	662	5.0		53	6.3	1.0	
11/9	655			51	6.0		
11/12	675	5.4					
11/18	690	5.5			8.0	1.0	

Transfusions given on 10/27, 10/30, 11/4, 11/5, 11/6, 11/17, 11/19, 11/20, 11/21, and 11/23.

Output

	Intake	Urine	Wangensteen
11/6	5600	650	8900
11/7	2800		
11/8	3500	5800	
11/9	2450	1000	
11/10	3400	2000	4600
11/11	8900	6700	11,400
11/12	7600	3100	5000
11/13	4000	1200	
11/14	3400	2850	7250
11/15	1800	1000	2900
11/16	1600	1100	2200
11/17	3200	1100	750
11/18	2150	1000	
11/19	1800	250	
11/20	2000	750	
11/21	2200	1000	
11/22	4320	2200	

CLINICAL DISCUSSION

Dr. E. D. Plass: Upon admission this patient presented a history and initial findings consistent with the original diagnosis of hyperemesis gravidarum with polyneuritis. The only portion of the story which did not fit was that of blood in the stools, which was largely discounted in the belief that it was of minor significance and might be explained on the basis of the violent emeses or the presence of hemorrhoids.

To substantiate the diagnosis of pernicious vomiting of pregnancy was (a) the onset of the symptom soon after the patient might have suspected that she was pregnant, and (b) the patient's admission that the pregnancy was not wanted. It has long been our belief that the usual nausea and vomiting of early pregnancy are due to some alteration in metabolism induced by the gravid state,

but that its aggravation into hyperemesis is on the basis of some psychogenic factor, with mental rebellion against the pregnancy assuming an important place. Unless and until an organic lesion is detected, this diagnosis appears acceptable. In this patient, the radiographic evidence of gastric retention and the laboratory data indicative of considerable bleeding from the gastro-intestinal tract pointed finally toward an intrinsic gastric lesion, but it is still not unreasonable to assume that the early symptoms were due to hyperemesis gravidarum.

The appearance of weakness and loss of the deep reflexes, especially in the lower extremities, after some weeks of persistent vomiting suggests the development of nutritional polyneuritis, which is one of the more serious sequelae of prolonged and intractable vomiting during pregnancy. By common agreement this neurologic syndrome is now attributed to a deficiency of the vitamin B complex, and more particularly of thiamin. Clinical observation and animal experimentation show conclusively that pregnancy markedly augments the organism's need for thiamin and, therefore, increases the speed of appearance of neuritic phenomena when an individual is on a diet which provides subminimal quantities. It is also known that a high carbohydrate diet, such as is commonly given to women with hyperemesis, increases the demand for thiamin, which is an enzyme essential for the complete degradation of the glucose molecule. There can be little doubt that the gravid condition of this woman contributed materially to the development of the neuritis, irrespective of the final decision concerning the cause of the persistent vomiting.

*Dr. F. R. Peterson:* From the information as presented up to this time, certain facts have been established.

The patient was pregnant and presented a picture compatible with pernicious vomiting of pregnancy including dehydration, alkalosis, and peripheral neuritis. However, if the patient did have pernicious vomiting of pregnancy, she also had an occlusion of the pylorus and dilatation of the stomach. The x-ray film of the stomach showed a typical organic lesion. This was strongly considered before the x-ray studies because of the occasional finding of a greatly dilated stomach with visible peristalsis.

When the patient was transferred to the Department of Surgery on November 8, a number of problems confronted us, the greatest of which was to explain why, after the dehydration, alkalosis, and anemia had been corrected, the patient continued pale, lethargic, semicomatose, and very ill. It seemed that correction of the obstruction had

to be done surgically before the patient could be cured, and yet it was just as obvious that surgery at that time would cause a fatality.

The responsibility for a decision between surgical and nonsurgical treatment is sometimes great. We frequently do surgical procedures against great odds, when nonsurgical treatment will certainly result in death. In this instance the great odds with surgery were apparent, but the effect of further conservative management was not, and we hoped it would be beneficial.

Some of the factors which indicated an almost certain fatality with surgery were tangible, many were not. The intangibles were hidden in the unexplained failure of the patient to respond to the usual conservative treatment for pyloric obstruction. Certain tangible factors, such as the pregnancy, the convulsions, and the parotitis, warranted further consideration.

The pregnancy was, in itself, no contraindication to surgery. One does avoid surgery during pregnancy if possible, but any urgent or emergency state normally requiring surgery is done. One cannot give assurance the pregnancy will not be terminated, but such a happening rarely jeopardizes the life of the patient. The greatest probability of a loss of pregnancy after surgery is in the first trimester, the least in the last trimester. This patient spontaneously delivered a dead fetus six days before her death. She became worse rather than better afterwards and it may definitely be presumed that the abortion was not responsible for this happening.

The occurrence of the convulsion on the third day after admission cannot be ignored. Convulsions may occur with alkalosis, and although alkalosis existed at this time it may be presumed that it was less than at admission since fluids and electrolytes had been given in large quantities. Therefore, the convulsion probably was not due to alkalosis. In the light of the subsequent occurrence of many convulsions just before death, the cause for these certainly existed throughout her hospital stay, contributed to the fatal outcome, and probably to her failure to improve at any time. One may easily philosophize on the effects of prolonged vomiting, calling attention to many obvious deficiencies that can be proved by laboratory tests and corrected by adequate treatment, but what may happen to the metabolism and function of many cells in the body after too long a period of inadequate nourishment cannot be determined. For example, we know this patient had signs pointing to a peripheral neuritis such as is seen after prolonged inanition. It is true that most of the signs of deficiencies will ultimately disappear if the deficiency is corrected. They were not changed by



conservative treatment. There must be a limit to which a patient can tolerate these deficiencies and beyond which a reversal cannot be expected. At least we were dealing with a moribund patient and an alteration of this state never occurred.

The occurrence of an acute parotitis five days after admission is worthy of mention. This complication is a possibility in any dehydrated patient. It is, however, rare in our experience except in the debilitated, aged patient, in the terminal stages of an illness. It is always looked upon as a bad omen, and in this patient having occurred after dehydration had been completely relieved, it seemed significant. It was not the reason for avoiding surgery, but its occurrence can be considered prophetic.

The cause for the obstruction was never established before death. The probabilities considered were (1) an ulcer, (2) carcinoma, and (3) some

the typical picture of a benign obstruction but as has been emphasized before, the lack of any persistent filling defect does not rule out malignancy. The final diagnosis was not positively made. More leaned toward malignancy than to an extraneous cause. This being the case, the probabilities were that malignancy would be found.

In conclusion, may I emphasize my belief that neither the pregnancy nor its termination contributed more than slightly to the outcome, and that the cause of the obstruction was responsible for the outcome only insofar as it caused persistent vomiting. Deficiencies occurring as the result of inadequate intake can be overcome to a greater or lesser extent, dependent upon the degree and duration of the obstruction. Even if obstruction is complete, if it is of short duration the administration of fluid, blood, and electrolytes will bring about an improvement in the condition of the patient sufficient that major surgical procedures can be done with relative safety. With prolonged obstruction the improvement following parenteral administration is less noticeable. Only relief of the obstruction will accomplish a complete restoration of health. Failing this, death is inevitable.

*Clinical Diagnoses:* Alkalosis; pyloric obstruction (question of pericholecystic abscess or malignancy); polyneuritis.

#### SUMMARY OF NECROPSY FINDINGS

*Stomach:* The essential lesion was a carcinoma of the pyloric end of the stomach which had produced almost complete obstruction. The tumor had extended through to involve the serosa of the stomach but there was no generalized carcinomatosis of the peritoneum, and neither adhesions nor peritoneal effusion were present. Posteriorly, the carcinoma had extended into the pancreas and metastases were present in the retroperitoneal lymph nodes near the hilum of the left kidney, and in the region of the pancreas.

Histologically, the neoplasm was an adenocarcinoma. Sections from different portions of the tumor showed rather wide variation in appearance. The main mass was, for the most part, quite anaplastic with only a suggestion of acinus formation here and there. In many areas the cells failed to form clumps. In general, the metastases showed considerably better differentiation with rather well developed acini in most areas. There was an unusual degree of lymphatic permeation with many of the regional lymphatics "stuffed" with neoplastic cells. However, no distant metastases could be found.

*Kidneys:* The kidneys were of some interest. They were considerably enlarged (right weighed 275 grams, left 350 grams) and free from scars. They were swollen and congested but the latter

(Continued on page 171)

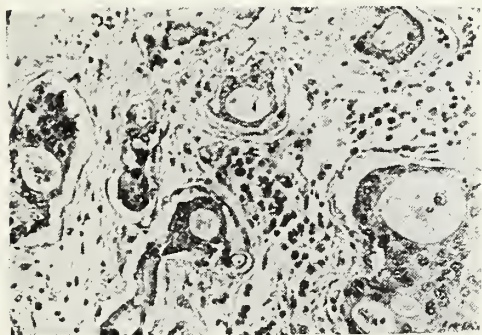


Fig. 3. Photomicrograph of the carcinoma as it appeared in lymph node. The differentiation is conspicuously greater than in the primary site.

extraneous cause such as infection secondary to gallbladder disease. The last consideration is rarely responsible for secondary constriction of the duodenum or pylorus. The duration of the obstruction in this patient, approximately five months, and the lack of an acute episode seemed to rule out this consideration. Even so, the frequent finding of tenderness over the gallbladder area, and after the uterus had emptied the presence of a mass in the epigastrium, kept this possibility alive.

Most of the staff considered the diagnosis either an ulcer or malignancy. The history did not help in the establishment of either. The patient was young for carcinoma, although this consideration is rather dangerous. There was a complete lack of history suggestive of an ulcer prior to the onset of vomiting. It is true that a quiet ulcer may perforate, but it is rare that one sees an obstruction develop to completeness over a period of a few months in a patient who has not previously had an ulcer history. The roentgenogram showed

# STATE DEPARTMENT OF HEALTH

*Walter L. Livingston*

## REPORTING OF MALARIA

The following table presents the total cases of malaria and number of deaths as notified to the State Department for the six year period, 1940-1945.

### MALARIA IN IOWA

Reported Occurrence for the Years 1940-1945		
Year	Cases	Deaths
1940 .....	60	1
1941 .....	20	0
1942 .....	2	0
1943 .....	16	1
1944 .....	241	2
1945 .....	465	1 (1st 11 mos.)

Reports from Schick General Hospital in Clinton accounted for 128 of the cases reported in 1944, the Prisoner of War camp in Clarinda reported 103 cases, and the remaining 10 cases were reported from eight widely separated counties.

Of the 465 cases reported in 1945, the number from Clinton County (Schick Hospital) was 317 and from Page County (POW camp) 35 cases. Counties reporting two or more cases each included: Polk 36, Woodbury 24, Kossuth 7, Benton 3, Butler 3, Boone 2, Bremer 2, Buena Vista 2, Clayton 2, Louisa 2, Wapello 2, Webster 2, Wright 2. One case each was reported from the following counties: Adams, Black Hawk, Buchanan, Cedar, Chickasaw, Dallas, Emmet, Franklin, Greene, Guthrie, Hamilton, Hancock, Humboldt, Linn, Madison, Marion, Mitchell, Monroe, Poweshiek, Sac, Scott, Tama, Taylor, Van Buren, and Winneshiek.

Physicians are requested to report to the State Department of Health all cases that come under their care or observation.

## NORMAL HUMAN DRIED BLOOD PLASMA

### Army-Navy Surplus

More information regarding the use of plasma has been received from the office of the Medical Director of the American Red Cross, Washington, D. C. The material presented on these pages was prepared for the American Red Cross by the Committee on Blood and Blood Derivatives of its Advisory Board on Health Services. The Com-

mittee consists of Doctors Charles A. Janeway, Chairman, Alfred Blalock, Edwin J. Cohn, Elmer L. DeGowin, Charles A. Doan, Robert F. Loeb, and Dr. John B. Alsever, Director of Blood Donor Service, American Red Cross.

### *Indications for Transfusion:*

"a. The principal functions of whole blood and plasma transfusions may be classified as shown in the accompanying table.

"b. Plasma has also been shown to be of distinct value in treatment of the shock which often exists in:

1. Crises of Addison's Disease
  2. Diabetic Coma after Dehydration
  3. Cholera and Infant Diarrhea
- and as supporting treatment in:
4. Intractable Ulcerative Colitis.

### *Treatment of Shock With Citrated Plasma:*

"The following paragraphs present a brief review of the use and dosage of plasma in shock accompanying hemorrhage, trauma, and burns. The lifesaving value of plasma in the treatment of shock is its most striking use in both civilian and military medicine.

### *Shock Due to Hemorrhage or Trauma:*

"In the treatment of shock all that is possible must be done to prevent the initiating factors from acting a sufficiently long time to produce clinical manifestations. The best treatment is, in other words, prevention. Patients exposed to obvious and sufficient precipitating factors must be treated as potential cases of shock without waiting for the appearance of clinical symptoms. Thus, a patient who has sustained extensive injury with crushing of tissues, with or without evident blood loss, should not be submitted to an extensive operative procedure involving general anesthesia without a dose of 250 to 500 cc. of undiluted or original plasma.

"In shock due to massive hemorrhage, the clinician must always bear in mind that the need for whole blood transfusions is urgent. Plasma transfusions will almost always tide the patient over if adequate amounts are given promptly enough, but whole blood is needed within a matter of hours



if the red cell level has been reduced near to the minimum compatible with adequate oxygenation of the body tissues. In any event the red cell level should be brought to normal as soon as possible to help create in the patient the optimal state for recovery.

“Shock Due to Burns:

“Patients with burns require very large amounts of plasma and must be watched carefully for the first 48 hours if shock is to be avoided. A good general rule is that 1,000 cc. of whole (undiluted)

plasma for every 10 per cent of body surface burned is required during the first 24 hours. Almost as much may be needed on the second day. The use of large quantities of plasma (2,000 cc. or more within 24 hours) may at times result in the development of pulmonary edema, particularly after the inhalation of fumes or in the presence of chest injury. It is often advisable to supplement plasma therapy with whole blood transfusions even in the first 48 hours to avoid subsequent anemia. After the first two days of treatment, whole blood is always preferable to plasma.”

INDICATIONS FOR TRANSFUSION\*

Indication	Whole Blood		Plasma or Serum	
	Chioce	State (fresh or pre-served)	Choice	State (fresh liquid, stored liquid, frozen, dried)
Shock due to hemorrhage (traumatic shock)	First <sup>1</sup>	No preference	Second	No preference
Shock with hemoconcentration — Initial treatment (burns, crush syndrome, and abdominal injuries)	Second	No preference	First	No preference
Hypoproteinemia	Second	No preference	First	No preference
Acute and chronic anemias	Imperative	No preference	Not indicated	
CO poisoning and methemoglobinemia	Imperative	No preference	Not Indicated	
Immune therapy	Second	No preference	First	Fresh liquid, frozen, or dried
Deficiency of complement	Either	Fresh	Either	Fresh liquid, frozen, or dried
Deficiency of prothrombin	Either	Fresh	Either	Frcsh liquid, frozen, or dried
Leukopenia and thrombocytopenia	Imperative	Fresh	Not indicated	
Hemophilia	First	Fresh	Second	Fresh liquid, frozen, or dried

1. The recommendation of first and second choice is made on the assumption that both blood and plasma are immediately available.  
\*Table adapted from OCD Technical Manual, “The Operation of a Hospital Transfusion Service.”

MORBIDITY REPORT

Disease	Feb. '46	Jan. '46	Feb. '45	Most Cases Reported From
Diphtheria .....	17	18	8	Hamilton, Clarke, Story
Scarlet Fever .....	237	207	271	Polk, Scott, Washington
Typhoid Fever .....	0	4	*14	.....
Smallpox .....	2	0	1	Page
Measles .....	146	397	94	Cerro Gordo, Fremont, Calhoun
Whooping Cough .....	27	39	17	Dubuque, Linn, Woodbury
Brucellosis .....	0	6	**99	.....
Chickenpox .....	110	142	420	Scott, Johnson, Calhoun
German Measles .....	37	4	5	Guthrie, Adair, Washington
Influenza .....	0	59	0	.....
Malaria .....	41	70	3	Polk, Story, Kossuth
Meningococcus Meningitis .....	17	11	8	Marion, Des Moines, Keokuk
Mumps .....	123	149	311	Des Moines, Woodbury, Clinton
Pneumonia .....	23	27	21	Jasper, Polk, Boone
Poliomyelitis .....	1	8	2	Story
Tuberculosis .....	53	56	91	For the state
Gonorrhea .....	183	226	220	For the state
Syphilis .....	152	125	142	For the state

\*12 of the 14 cases are delayed reports  
\*\*all delayed reports

# The JOURNAL of the Iowa State Medical Society

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## COLLEGE OF MEDICINE ANNUAL NUMBER

Again it is our pleasure to present to our readers an issue in which all of the scientific papers are presented by the faculty of the College of Medicine of the State University of Iowa at Iowa City. As noted in the remarks of Dean MacEwen on the opening page, this issue is dedicated fittingly to those medical graduates from the University of Iowa who lost their lives in the recent war. The papers presented this year cover a group of interesting and informative subjects and have been especially prepared to make this edition as outstanding as have been the numbers of the past three years.

You will also find in this issue in the History of Medicine section an account of the College of Medicine, prepared by Dr. McClintock in his inimitable fashion, covering the development of the College of Medicine as a part of the recognition of its seventy-fifth anniversary.

Again we may be proud of the outstanding position held by the College of Medicine of the Iowa University among the medical colleges of the country. Not only the alumni but all members of the Iowa State Medical Society should be increasingly aware of the wealth of scientific material presented by the various departments of our medical college.

At this time we wish to thank Dean MacEwen, as well as Dr. R. T. Tidrick and his committee, who did so much to make this issue a proper tribute to those alumni who sacrificed so much.

## AN INVITATION TO A PARTY

On behalf of the officers of the Iowa State Medical Society, you are invited to attend the annual session to be held in Des Moines April 18 and 19. The headquarters will, as usual, be located at the Hotel Fort Des Moines. The program for this session was presented in the March issue of the JOURNAL.

While the session is devoted mainly to scientific and economic discussions, we believe you will find some of the atmosphere of a party as has been noted in other similar meetings this year, and more pronounced because of the fact that conditions did not permit our annual session in 1945. The return of so many of our service physicians gives rise to an atmosphere which has been lacking for several years. You will be able to find again the familiar faces which have been missing too long at the annual meetings of the Society.

The program committee has outlined a splendid group of papers covering subjects which should be of distinct value to each member of our Society. As usual the eye, ear, nose and throat group, the fracture committee, the obstetric, and the orthopedic sections will have special meetings in addition to the usual luncheon groups. We are indeed fortunate to have as a guest speaker Surgeon General Hawley of the United States Veterans Administration. Again there will be complete scientific and commercial exhibits which represent hours of effort in preparation. And, as usual, gala events have been arranged for your entertainment. The customary gathering of the golfers for an afternoon's recreation and a pre-convention clinic have both been scheduled for Wednesday afternoon, April 17.

Here, then, is your invitation. We shall expect you to attend the party and to make it a huge success, not only for yourself but for the Society as a whole.

## CANCER MONTH

The designation by presidential proclamation of April as cancer month focuses attention upon a subject in which professional activity lags far behind public interest.

The American Cancer Society has reorganized its Field Army and no longer restricts membership to women. The enhancement of its program and intensification of the drive for funds is indicated by the fact that the goal of the Iowa Division this year is approximately \$200,000.

Considering that annually in Iowa there are approximately one hundred fifty times as many cancer deaths and forty times as many cases as there are of poliomyelitis, and that there are four



times as many cases and ten times as many deaths from cancer as from tuberculosis, this does not seem a disproportionate quota. It means only about \$2,000 per county, and there is no county in which there are not now at least twenty to thirty victims of cancer.

But the campaign is much more than a fund raising project. It is a revival of lay education that will arouse public interest in periodic health examinations, in the value of group diagnosis in tumor clinics, and in the modern trend toward cancer detection centers. These are movements which profoundly affect medical practice in its every phase.

The doctor holds the key position in this as in every other organized program for the prevention of disease and the conservation of life and health. Although this and similar movements arise from popular demand rather than from the initiative of medical groups, we cannot shut our ears to the demand for sound, ethical leadership else we risk the exploitation of the public by more zealous but less competent leaders.

The cancer program offers a fertile field for humanitarian effort as well as remunerative practice.

One medical society in another state suggests that physicians display in their offices a card to the effect that "This office cooperates with the State Cancer Control program. Preventive examinations by appointment. Fee \$...."

The late Dr. McNamara, by personal solicitation of the profession a few years ago, succeeded in raising a considerable financial contribution to the Cancer Society. This was a proper recognition of our obligation to society in the preventive field of medicine. But even more important than our financial assistance is the moral support we owe.

Our patients deserve the utmost care in complete and really adequate physical examinations and the most expert, considerate and scientific counsel. Cancer is not a disease with which we can temporize, and when doubt prevails as to its existence, competent consultation is imperative. Nowhere is this so conveniently or economically obtained than in the tumor clinic. More of these clinics are needed in the larger cities and their organization and maintenance depend on the willingness of doctors to serve and cooperate.

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#### GELATIN SPONGES IN HEMOSTASIS

Various types of coagulant packs and sponges have been of value for many years. There are numerous surgical complications in which hemostasis is necessary when ligature, coagulation, and

the application of metallic clips is of no avail, due to inaccessibility or retraction of the severed vessel.

Crushed muscle has been effective because of adhesion to the bleeding surface and the potential release of thrombin. However, this has not been too practical since the muscle pledget can be easily moved from the site of hemorrhage. Mechanical packing of a wound or the application of hot sponges in a delicate soft tissue such as the brain, spinal cord, or nerves may be attended with a disruption of physiologic response and distress to the patient after operation.

Thus the work of Ingraham and Bailey was hailed with enthusiasm when fibrin foam was found to be a satisfactory coagulant with minimal tissue reaction. The difficulty in procuring fibrin foam and possible prolonged absorptive action led Light and Prentice to experiment with gelatin sponges dipped in topical bovine thrombin. This work covered a careful analysis of studies with induced laceration of the dura, brain, and saggital sinus in *Macacus Rhesus* monkeys and a series of clinical cases.

The results of this study indicated a more satisfactory control of bleeding with gelatin sponges dipped in topical thrombin. Gelatin has the property of absorbing fifty times its weight in water and readily promotes hemostasis by an expanding formation of a clot at the bleeding point, which occurs within ten to forty-five seconds, and it has been noted that the sponge is not dislodged as was the muscle pledget. This method has been utilized in various surgical clinics covering routine neurosurgical procedures with satisfactory clinical results, and there has been no evidence of tissue reaction. Gelatin and topical thrombin are much cheaper than fibrin foam and are more satisfactory from a clinical and economic viewpoint. Once in place and hemostasis follows, the sponge remains in the wound to absorb gradually during the progress of healing.

This valuable adjunct to the surgeon's armamentarium need not be limited to neurosurgery but is applicable to the control of troublesome bleeding in all types of operations.

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#### IOWA SOCIETY FOR CRIPPLED CHILDREN

A report of the Iowa Society for Crippled Children and the Disabled has appeared in the *JOURNAL* at this time the past two years. Progress has been made in the society's broad program of aid to the handicapped of Iowa.

The last Iowa legislature took a forward step by making appropriations to provide special

education for all handicapped children and to employ qualified teachers for special instruction in day classes, schools, homes, hospitals, and other places of education. The society strongly supported the legislation. As yet there are few "qualified instructors" in the field of special education, however, and the society has published a pamphlet appealing to teachers to study new courses in the scientific training of handicapped children soon to be offered by Iowa's leading colleges. Also, the pamphlet offers nine different pieces of literature which are to be sent to teachers without charge.

Another example of the society's progress is in the camping program for handicapped children. Last year seventy crippled children attended camp, the year before, fifty-one.

The results of the Spastic Club of Iowa, sponsored by the society, were recently publicized with a page in the Sunday *Register* rotogravure section picturing the activity at the cerebral palsy pre-school.

The society's state headquarters, 400 Plymouth Building in Des Moines, serves as a clearing house for nonduplicated assistance and counseling of handicapped children and adults. Cases are located through the society's county boards and staff, and through public health nurses, school teachers and superintendents, doctors, and college extension department specialists. The counseling service helps to find work for handicapped people, encourages and helps the parents of handicapped children, and works with thirty other state and national public service organizations, the services of which the society never duplicates.

It would take many pages to enumerate all of the varied ways in which the society carries out its broad program, a program which is unique in that it aims to serve adults and children of all creeds and races in all categories of physical handicaps.

The sale of Easter Seals has increased each year. That the main means of support for the society's work is growing is ample indication that the program is effectively, efficiently, and economically carried forward. You can share in the big job of helping Iowa's handicapped people to a happier, fuller, more productive life. Offer a helping hand by contributing as many of your dollars as you can for your block of 1946 Easter Seals.



## DOCTOR BIERRING APPOINTED PROFESSOR EMERITUS

In recognition of his unusual relationship to the practice of medicine in the state of Iowa, Dr. Walter L. Bierring has been honored with appointment as Professor Emeritus of the Department of Theory and Practice of Medicine in the State University of Iowa College of Medicine, Iowa City.

This tribute is fittingly deserved, and all friends of Dr. Bierring will be happy to join with the JOURNAL in offering congratulations to him.

## IOWA INTERPROFESSIONAL ASSOCIATION MEETS APRIL 24

Iowa physicians are invited to attend a meeting of the Iowa Interprofessional Association in Des Moines at Hotel Fort Des Moines Wednesday, April 24, at 8:00 p.m. The main speaker of the evening will be Dr. R. W. Howard, who is associated in research work with the Lederle Laboratories. Dr. Howard will speak on The Rh Factor in Blood.

## FELLOWSHIP EXAMINATIONS FOR COLLEGE OF CHEST PHYSICIANS

The next oral and written examinations for Fellowship in the American College of Chest Physicians will be held in San Francisco June 29, 1946. Applicants for Fellowship in the College who plan to take the examination should communicate with the Executive Secretary, American College of Chest Physicians, 500 North Dearborn Street, Chicago 10, Illinois.

The Twelfth Annual Meeting of the College is scheduled to be held at the Sir Francis Drake Hotel in San Francisco June 29 to July 2.

## REFRESHER COURSE IN OTOLARYNGOLOGY

A one week didactic and clinical refresher course in otolaryngology has been arranged for specialists in the field from May 13 to 18, inclusive. Applications for registration should include school of graduation, training and experience. Check for tuition (\$50.00) should accompany the application.

In addition, a special course in broncho-esophagology will be given from June 3 to 15, inclusive. It will consist of lectures, animal and cadaver demonstrations, diagnostic and surgical clinics. The course will be under the direction of Drs. Paul H. Holinger and Albert H. Andrews, Jr. Tuition for this course is \$100.00. Check should accompany application. Class limited to twelve physicians.

For further information address the Department of Otolaryngology, University of Illinois College of Medicine, 1853 West Polk Street, Chicago, Illinois.

## CHANGE OF ADDRESS \*

Help your central office to maintain an accurate mailing list. Send your change of address promptly to the Journal, 505 Bankers Trust Bldg., Des Moines 9, Iowa.



## *President's Page*

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Major General Paul R. Hawley, Chief Medical Director of the Veterans Administration, will be the guest of the Iowa State Medical Society April 17 and 18. He is scheduled to address three groups: the House of Delegates Wednesday evening, the General Session Thursday morning, and the Open House Thursday evening. He will also be the guest of honor Thursday noon at a luncheon to which all members of the Society are invited. The medical care of veterans is vital to every physician in Iowa and an opportunity is thus afforded to acquire firsthand information from the Administration.

This is the first time that a government agency has sought information, advice, and cooperation from the "rank and file" of the medical profession. General Hawley, with the wholehearted support of General Bradley, is fighting our battles in Washington. Together they have originated a method of approach for the preparation of a program for medical care that could easily be adopted by other government agencies. The cooperation of our State Medical Society will contribute to the success of their program. Its success will become a powerful weapon against the socialization of medicine.

During the past year this page has commented upon subjects which have engaged the attention of your officers. I trust it has been informative, interesting, and worthwhile. I appreciate the comments and the interest it has created both within the Society and among other groups throughout the state.

*R. S. Bernardy, M.D.*

*President, Iowa State Medical Society*

# COUNTY MEDICAL SOCIETY OFFICERS

COUNTY	PRESIDENT	SECRETARY	DEPUTY COUNCILOR
Adair.....	A. J. Gantz, Greenfield.....	A. S. Bowers, Orient.....	A. S. Bowers, Orient
Adams.....	A. W. Brunk, Prescott.....	J. H. Wallahan, Corning.....	A. W. Brunk, Prescott
Allamakee.....	J. W. Myers, Postville.....	J. W. Thornton, Lansing.....	J. W. Thornton, Lansing
Appanoose.....	N. W. Labagh, Mystic.....	C. F. Brummitt, Centerville.....	E. A. Larsen, Centerville
Audubon.....	R. H. Payne, Exira.....	W. H. Halloran, Audubon.....	L. E. Jensen, Audubon
Benton.....	N. B. Williams, Belle Plaine.....	A. Dutton, Van Horne.....	N. B. Williams, Belle Plaine
Black Hawk.....	B. C. Boston, Waterloo.....	C. A. Waterbury, Jr., Waterloo.....	A. J. Joyn, Waterloo
Boone.....	A. B. Deering, Boone.....	B. T. Whitaker, Boone.....	J. O. Gance, Ogden
Bremer.....	H. W. Rathe, Waverly.....	M. N. Gernsey, Waverly.....	F. R. Sparks, Waverly
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Buena Vista.....	F. C. Foley, Newell.....	T. R. Campbell, Sioux Rapids.....	H. E. Farnsworth, Storm Lake
Butler.....	F. O. Rolfs, Parkersburg.....	F. F. McKean, Allison.....	Bruce Ensley, Shell Rock
Calhoun.....	P. W. Van Metre, Rockwell City.....	J. H. Faust, Manson.....	R. G. Hinrichs, Manson
Carroll.....	W. A. Anneberg, Carroll.....	J. R. Morrison, Carroll.....	W. L. McConkie, Carroll
Cass.....	R. M. Needles, Atlantic.....	W. F. Giegerich, Atlantic.....	P. M. Hoffman, Tipton
Cedar.....	Fred Montz, Lowden.....	J. E. Smith, Clarence.....	G. J. Sartor, Mason City
Cerro Gordo.....	A. B. Phillips, Clear Lake.....	D. L. Long, Mason City.....	C. H. Johnson, Cherokee
Cherokee.....	M. F. Joyn, Marcus.....	D. C. Koser, Cherokee.....	H. E. Stroy, Osceola
Chickasaw.....	J. M. Kerwick, New Hampton.....	J. E. Murtaugh, New Hampton.....	P. E. Gardner, New Hampton
Clarke.....	F. S. Bowen, Woodburn.....	C. R. Harken, Osceola.....	C. C. Colleser, Spencer
Clay.....	E. E. Munger, Jr., Spencer.....	C. C. Colleser, Spencer.....	P. R. V. Hommel, Elkader
Clayton.....	P. R. V. Hommel, Elkader.....	T. W. Lichter, Edgewood.....	R. F. Luse, Clinton
Clinton.....	R. T. Lenaghan, Clinton.....	Elsie R. Carrington, Clinton.....	C. L. Sievers, Denison
Crawford.....	E. V. Zaeske, Charter Oak.....	Dora E. K. Zaeske, Charter Oak.....	E. J. Butterfield, Dallas Center
Dallas-Guthrie.....	W. R. Van Duzer, Casey.....	S. J. Brown, Panora.....	S. J. Brown, Panora
Davis.....	C. H. Cronk, Bloomfield.....	H. C. Young, Bloomfield.....	C. H. Cronk, Bloomfield
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Emmett.....	S. C. Kirkegaard, Estherville.....	L. W. Loving, Estherville.....	S. C. Kirkegaard, Estherville
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Greene.....	L. C. Nelson, Jefferson.....	G. A. Biebesheimer, Reinbeck.....	L. C. Nelson, Jefferson
Grundy.....	C. H. Bartruff, Reinbeck.....	M. B. Galloway, Webster City.....	W. O. McDowell, Grundy Center
Hamilton.....	R. C. Crumpton, Webster City.....	W. F. Missman, Klemme.....	M. B. Galloway, Webster City
Hancock-Winnebag.....	C. V. Hamilton, Garner.....	F. N. Cole, Iowa Falls.....	C. V. Hamilton, Garner
Hardin.....	W. H. Van Tiger, Eldora.....	F. H. Hanson, Magnolia.....	G. F. Dolmage, Buffalo Center
Harrison.....	R. H. Cutler, Little Sioux.....	B. B. Gloeckler, Mt. Pleasant.....	F. N. Cole, Iowa Falls
Henry.....	J. S. Jackson, Mt. Pleasant.....	F. E. Giles, Cresco.....	S. W. Huston, Mt. Pleasant
Howard.....	W. A. Bockoven, Cresco.....	A. S. Arent, Humboldt.....	W. A. Bockoven, Cresco
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Ida.....	M. W. Grubb, Galva.....	J. J. Sinn, Williamsburg.....	E. S. Parker, Ida Grove
Iowa.....	F. C. Schadt, Williamsburg.....	J. J. Tilton, Bellevue.....	I. J. Sinn, Williamsburg
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Johnson.....	J. D. Paul, Anamosa.....	C. R. Smith, Wyoming.....	G. C. Albright, Iowa City
Jones.....	T. J. G. Dulin, Sigourney.....	John Maxwell, What Cheer.....	T. M. Redmond, Monticello
Keokuk.....	P. V. Janse, Algona.....	M. G. Bourne, Algona.....	D. L. Grothaus, Delta
Kossuth.....	W. M. Hogle, Keokuk.....	B. D. Van Werden, Keokuk.....	J. G. Clapsaddle, Burt
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Louisa.....	A. L. Yocom, Jr., Chariton.....	R. E. Anderson, Chariton.....	B. F. Wolverson, Cedar Rapids
Lucas.....	H. E. Carver, Earlham.....	J. H. Sherlock, Rock Rapids.....	J. H. Chittum, Wapello
Lyon.....	G. W. Bennett, Oskaloosa.....	E. M. Olson, Winterset.....	S. L. Throckmorton, Chariton
Madison.....	V. J. Elliott, Knoxville.....	W. V. Campbell, Oskaloosa.....	G. M. DeYoung, George
Mahaska.....	J. E. Sinning, Marshalltown.....	D. A. Mater, Knoxville.....	C. B. Hickenlooper, Winterset
Marion.....	W. A. DeYoung, Glenwood.....	O. D. Wolfe, Marshalltown.....	E. B. Wilcox, Oskaloosa
Marshall.....	M. O. Eiel, Osage.....	T. E. Shonka, Malvern.....	H. L. Bridgeman, Knoxville
Mills.....	E. J. Lieska, Ute.....	R. L. Whitley, Osage.....	A. D. Woods, State Center
Mitchell.....	H. J. Richter, Albion.....	E. E. Gingles, Onawa.....	D. W. Harman, Glenwood
Monona.....	L. R. Moriarty, Villisca.....	T. A. Moran, Melrose.....	T. S. Walker, Riceville
Monroe.....	J. L. Klein, Jr., Muscatine.....	Helge Borre, Red Oak.....	C. W. Young, Onawa
Montgomery.....	W. W. Hayne, Paullina.....	K. E. Wilcox, Muscatine.....	C. C. Fowler, Lovilia
Muscatine.....	E. S. Aelits, Sibley.....	W. S. Balkema, Sheldon.....	Oscar Alden, Red Oak
O'Brien.....	H. McK. Bunch, Shenandoah.....	Frank Rizzo, Sibley.....	T. F. Beveridge, Muscatine
Osceola.....	J. W. Woodbridge, Emmetsburg.....	J. F. Aldrich, Shenandoah.....	W. R. Brock, Sheldon
Page.....	M. J. Joyn, Le Mars.....	P. O. Nelson, Emmetsburg.....	Frank Reinsch, Ashton
Palo Alto.....	W. F. Brinkman, Pocahontas.....	L. C. O'Toole, Le Mars.....	W. H. Maloy, Shenandoah
Plymouth.....	M. E. Olsen, Des Moines.....	C. L. Jones, Gilmore City.....	H. L. Brereton, Emmetsburg
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Polk.....	H. C. Parsons, Grinnell.....	G. V. Caughlan, Council Bluffs.....	C. L. Jones, Gilmore City
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Poweshiek.....	W. I. Evans, Sac City.....	D. Gibson, Sac City.....	G. N. Best, Council Bluffs
Ringgold.....	W. C. Goenne, Davenport.....	J. H. Sunderbruch, Davenport.....	C. E. Harris, Grinnell
Sac.....	Carl V. Bisgard, Harlan.....	A. L. Nielson, Harlan.....	E. J. Watson, Diagonal
Scott.....	E. B. Grossmann, Orange City.....	C. B. Murphy, Alton.....	J. R. Dewey, Schaller
Shelby.....	L. E. Rosebrook, Ames.....	W. B. Armstrong, Ames.....	A. P. Donohoe, Davenport
Sioux.....	A. J. Wentzien, Tama.....	A. J. Havlik, Tama.....	A. L. Nielson, Harlan
Story.....	W. H. Cash, Lenox.....	J. H. Gasson, Bedford.....	Wm. Doornink, Orange City
Tama.....	J. A. Liken, Creston.....	C. E. Sampson, Creston.....	Bush Houston, Nevada
Taylor.....	Roscoe Pollock, Douds-Leando.....	L. A. Coffin, Farmington.....	A. A. Pace, Toledo
Union.....	R. O. Hughes, Ottumwa.....	L. A. Taylor, Ottumwa.....	G. W. Rimel, Bedford
Van Buren.....	M. B. Cunningham, Norwalk.....	C. H. Mitchell, Indianola.....	C. C. Rambo, Creston
Wapello.....	E. D. Miller, Wellman.....	W. S. Kyle, Washington.....	L. A. Coffin, Farmington
Warren.....	D. R. Ingraham, Sewal.....	C. F. Brubaker, Corydon.....	C. A. Henry, Farson
Washington.....	C. J. Baker, Fort Dodge.....	W. C. Thatcher, Fort Dodge.....	C. H. Mitchell, Indianola
Wayne.....	R. N. Svendsen, Decorah.....	H. H. Ennis, Decorah.....	E. D. Miller, Wellman
Webster.....	C. R. Watkin, Sioux City.....	R. C. Mugan, Sioux City.....	J. H. McCall, Allerton
Winnebago.....	B. H. Osten, Northwood.....	M. P. Allison, Northwood.....	H. E. Nelson, Dayton
Woodbury.....	L. D. MacNaughton, Eagle Grove.....	J. R. Christensen, Eagle Grove.....	L. C. Kuhn, Decorah
Worth.....			D. B. Blume, Sioux City
Wright.....			S. S. Westly, Manly
			J. H. Sams, Clarion



# Roster of Iowa Physicians in Military Service

As of March 22, 1946

## Allamakee County

Ivens, M. H., Waukon (Miami Beach, Fla.).....Capt., A.U.S.

## Appanoose County

Condon, F. J., Centerville (Owensboro, Ky.)..Major, U.S.P.H.S.  
Edwards, R. R., Centerville (APO 758, New York,  
N. Y.) .....Major, A.U.S.

## Benton County

Senfeld, Sidney, Belle Plaine

## Black Hawk County

Bickley, D. W., Waterloo (APO New York, N. Y.)..Capt., A.U.S.  
Ericsson, M. G., Cedar Falls (Ft. Snelling, Minn.)..Capt., A.U.S.  
Marquis, F. M., Waterloo (APO 513, New York  
N. Y.) .....Capt., A.U.S.  
Smith, R. G., Cedar Falls (APO 512, New York,  
N. Y.) .....Major, A.U.S.

## Boone County

Brewster, E. S., Boone (APO 254, New York, N. Y.)..Major, A.U.S.

## Buena Vista County

Hansen, R. R., Storm Lake.....Lt., U.S.N.R.  
Witte, H. J., Marathon (APO 350, New York,  
N. Y.) .....Major, A.U.S.

## Butler County

James, R. A., Allison (Mare Island, Cal.)

## Calhoun County

McVay, M. J., Lake City (Waco, Texas).....Capt., A.U.S.

## Carroll County

Freedland, Maurice, Coon Rapids  
Scannell, R. C., Carroll (Denver, Colo.).....Capt., A.U.S.  
Wyatt, M. R., Manning (Chatham Field, Ga.).....Capt., A.U.S.

## Cass County

Peterson, M. T., Atlantic (Fleet PO, San Francisco,  
Cal.) .....Capt., A.U.S.  
Schiff, Joseph, Anita (Walla Walla, Wash.).....Capt., A.U.S.

## Cedar County

Laughlin, R. M., Tipton (San Diego, Cal.).....Lt., U.S.N.R.

## Cerro Gordo County

Fitzpatrick, M. R., Mason City (Ft. Dix, N. J.)...1st Lt., A.U.S.  
Harris, R. H., Mason City (Cando, N. Dak.).....Major, A.U.S.  
Harrison, G. E., Mason City.....Col., A.U.S.  
Morgan, P. W., Mason City (APO 519, New York,  
N. Y.) .....Capt., A.U.S.  
Mullen, L. M., Mason City (Kansas City, Mo.).....Capt., A.U.S.  
Tice, G. L., Mason City (Mare Island, Cal.).....Lt., U.S.N.R.  
Tice, W. A., Mason City (Jacksonville, Fla.)...Lt. (jg), U.S.N.R.  
Woodward, E. R., Mason City (Great Lakes, Ill.)...Lt., U.S.N.R.

## Cherokee County

George, L. A., Cherokee.....A.U.S.

## Clayton County

Glesne, O. G., Monona (Knoxville, Iowa).....Capt., A.U.S.

## Clinton County

Amesbury, H. A., Clinton.....Major, A.U.S.  
O'Donnell, J. E., Clinton.....Lt., U.S.N.R.  
Speigel, I. J., Clinton (Galesburg, Ill.).....Capt., A.U.S.  
Waggoner, C. V., Clinton.....Lt. Comdr., U.S.N.R.  
Wells, L. L., Clinton.....Capt., A.U.S.

## Dallas-Guthrie Counties

Butterfield, E. T., Dallas Center (Springfield, Mo.) Capt., A.U.S.  
Byrnes, A. W., Guthrie Center (Fort Custer, Mich.)..Major, A.U.S.

## Delaware County

Baumgarten, Oscar, Earlville.....Capt., A.U.S.

## Des Moines County

Eigenfeld, M. L., Burlington (Cleveland, Ohio)...1st Lt., A.U.S.  
Sage, E. C., Burlington (Fleet PO, San Francisco,  
Cal.) .....Lt. Comdr., U.S.N.R.

## Dubuque County

Anderson, E. E., Dubuque (Bradley Field, Conn.)...Capt., A.U.S.  
Cunningham, J. C., Dubuque (Fairfield, Ohio).....Capt., A.U.S.  
Edstrom, Henry, Dubuque (Galesburg, Ill.).....Lt. Col., A.U.S.  
Hall, C. B., Dubuque.....Capt., A.U.S.  
Knoll, A. H., Dubuque (San Francisco, Cal.).....Major, A.U.S.  
Lavery, H. B., Dubuque (Washington, D. C.).....Lt. Col., A.U.S.  
Leik, D. W., Dubuque (Wichita Falls, Tex.).....Capt., A.U.S.  
Mueller, J. J., Dubuque (APO 230, New York, N. Y.)..Capt., A.U.S.  
Olson, F. F., Dubuque (San Francisco, Cal.)..Lt. Comdr., U.S.N.R.  
Painter, R. C., Dubuque (Cheyenne, Wyo.)..Lt. Comdr., U.S.N.R.

Scharle, Theodore, Dubuque (Ft. Sam Houston,  
Texas) .....Capt., A.U.S.  
Straub, J. J., Dubuque (Bethesda, Md.).....Lt. Comdr., U.S.N.R.

## Emmet County

Collins, L. E., Estherville (APO 247, San Fran-  
cisco, Cal.) .....1st Lt., A.U.S.

## Fayette County

Sulzbach, J. F., Oelwein  
Walsh, E. W., Hawkeye (Huntington, W. Va.).....A.U.S.

## Floyd County

Huber, R. H., Charles City.....1st Lt., A.U.S.  
Mackie, D. G., Charles City (Danville, Ind.).....Capt., A.U.S.  
Magsdick, Carl, Charles City (Green Cove Springs,  
Fla.) .....Lt., U.S.N.R.

## Franklin County

Hedgecock, L. E., Hampton (Camp Lejeune,  
N. Car.) .....Comdr., U.S.N.R.

## Fremont County

Kerr, W. H., Hamburg (APO 926, San Francisco,  
Cal.) .....Capt., A.U.S.

## Greene County

Cartwright, F. P., Grand Junction (Colorado Springs,  
Colo.) .....Capt., A.U.S.

## Grundy County

Cullison, R. M., Dike (Fort Howard, Md.).....Major, A.U.S.

## Hamilton County

Mooney, F. P., Jewell.....Capt., A.U.S.  
Schrader, M. A., Webster City (Topeka, Kan.).....1st Lt., A.U.S.

## Hancock-Winnebag Counties

Irish, T. J., Forest City (San Diego, Cal.).....Comdr., U.S.N.R.

## Hardin County

Steenrod, E. J., Iowa Falls (Oceanside, Cal.)..Lt. Comdr., U.S.N.R.

## Henry County

Cogan, Samuel, Mt. Pleasant  
Dwankowski, Carl, Mt. Pleasant (APO 511,  
New York, N. Y.).....Major, A.U.S.  
Ristine, L. P., Mt. Pleasant (Denver, Colo.).....Major, A.U.S.

## Humboldt County

Coddington, J. H., Humboldt (APO 719, San  
Francisco, Cal.) .....Capt., A.U.S.

## Ida County

Martin, J. W., Holstein (Albany, Ga.).....Capt., A.U.S.

## Iowa County

Geiger, U. S., North English (Kansas City,  
Mo.) .....Lt. Comdr., U.S.N.R.

## Jackson County

Skelley, P. B., Jr., Maquoketa (APO 247, San  
Francisco, Cal.) .....1st Lt., A.U.S.

## Jasper County

Doake, Clarke, Newton.....1st Lt., A.U.S.  
Ritchey, S. J., Newton.....Lt. Col., A.U.S.

## Jefferson County

Frey, Harry, Fairfield (Norfolk, Va.).....Comdr., U.S.N.R.  
Graber, H. E., Fairfield (APO 75, San Fran-  
cisco, Cal.) .....Lt. Col., A.U.S.  
Taylor, I. C., Fairfield (Washington, D. C.).....1st Lt., A.U.S.

## Johnson County

Albert, S. M., Iowa City.....Capt., A.U.S.  
Bunge, R. G., Iowa City (Orlando, Fla.).....Capt., A.U.S.  
Cobb, E. A., Iowa City (APO 14987, San Fran-  
cisco, Cal.) .....1st Lt., A.U.S.  
Coburn, F. E., Iowa City (Toronto, Canada).....Capt., R.C.A.  
Crowell, E. A., Iowa City (Ft. Geo. Wright, Wash.)..Capt., A.U.S.  
Diddle, A. W., Iowa City (Fleet PO, San Francisco,  
Cal.) .....Lt. Comdr., U.S.N.R.  
Emmons, M. B., Iowa City (Camp Bowie, Texas)....Capt., A.U.S.  
Evers, L. B., Iowa City.....Major, U.S.P.H.S.  
Field, Grace E., Iowa City (Denver, Colo.).....1st Lt., A.U.S.  
Flax, Ellis, Iowa City.....Lt. (jg), U.S.N.R.  
Francis, N. L., Iowa City (Annapolis, Md.).....Lt. (jg), U.S.N.R.  
Hartung, Walter, Iowa City (Camp Carson, Colo.)..Capt., A.U.S.  
Hessin, A. L., Iowa City (APO 469, New York,  
N. Y.) .....Major, A.U.S.  
Irwin, R. L., Iowa City.....Capt., U.S.N.R.  
January, L. E., Iowa City (Monahans, Texas).....Major, A.U.S.  
Keislar, H. D., Iowa City (Washington, D. C.).....Capt., A.U.S.  
Lage, R. H., Iowa City (San Francisco, Cal.).....Lt., U.S.N.R.  
Laubscher, J. H., Iowa City (Ft. Benning, Ga.)....1st Lt., A.U.S.

Moreland, F. B., Iowa City (Maxwell Field, Ala.)...1st Lt., A.U.S.  
 Ringrose, E. J., Iowa City  
 Sells, R. L., Jr., Iowa City (Palmdale, Cal.).....Capt., A.U.S.  
 †Springer, E. W., Iowa City (APO 678, New York,  
 N. Y.) .....Capt., A.U.S.  
 Stephens, R. L., Iowa City (Orlando, Fla.).....Capt., A.U.S.  
 Stump, R. B., Iowa City (Denver, Colo.).....Capt., A.U.S.  
 Titus, E. L., Iowa City (Los Angeles, Cal.).....Col., A.U.S.  
 Trapasso, T. J., Iowa City (APO 520, New York,  
 N. Y.) .....Capt., A.U.S.  
 Vander Laan, C. A., Iowa City.....Capt., A.U.S.  
 Voelker, C. A., Jr., Iowa City.....Capt., A.U.S.  
 Weatherly, H. E., Iowa City.....Major, A.U.S.  
 Wollmann, W. W., Iowa City (Martinsburg,  
 W. Va.) .....Capt., A.U.S.  
 Ziffren, S. E., Iowa City (APO 879, New York,  
 N. Y.) .....Capt., A.U.S.

#### Junior Members

†Adams, M. P., Iowa City (Fleet PO, San Francisco,  
 Cal.) .....Lt. (jg), U.S.N.R.  
 Ahrens, J. H., Iowa City (APO San Francisco, Cal.)...A.U.S.  
 Ball, A. L., Iowa City (Camp Polk, La.).....Major, A.U.S.  
 Barrent, M. E., Iowa City (Camp Tyson, Tenn.)...Capt., A.U.S.  
 Blair, J. D., Iowa City (APO San Francisco, Cal.)...Major, A.U.S.  
 Boyd, R. J., Iowa City (Spokane, Wash.).....Capt., A.U.S.  
 Brinthal, E. S., Iowa City (APO New York, N. Y.)...Major, A.U.S.  
 Burr, S. P., Iowa City (APO San Francisco, Cal.)...1st Lt., A.U.S.  
 Carney, R. G., Iowa City (Fleet PO, San Francisco,  
 Cal.) .....Lt., U.S.N.R.  
 Connole, J. F., Iowa City (Camp Bowie, Texas)....1st Lt., A.U.S.  
 Couch, O. A., Iowa City (Camp Van Dorn, Miss.)...1st Lt., A.U.S.  
 Coulson, F. H., Iowa City (APO New York, N. Y.)...Capt., A.U.S.  
 Ehrenhaft, J. L., Iowa City (APO New York,  
 N. Y.) .....Capt., A.U.S.  
 Freiberg, M., Iowa City (Jefferson Barracks, Mo.)...A.U.S.  
 Hamilton, H. E., Iowa City (Chicago, Ill.).....1st Lt., A.U.S.  
 Harms, G. E., Iowa City (Carlisle Barracks,  
 Penn.) .....1st Lt., A.U.S.  
 Hendricks, A. B., Iowa City (Fleet PO, San Francisco,  
 Cal.) .....Lt. Comdr., U.S.N.  
 Hovis, Wm., Iowa City (Fleet PO, San Francisco,  
 Cal.) .....Lt. (jg), U.S.N.R.  
 Ide, L. W., Iowa City (Fort Warren, Wyo.).....1st Lt., A.U.S.  
 Kaplan, Nathan, Iowa City (Carlisle Bar-  
 racks, Pa.) .....1st Lt., A.U.S.  
 Keil, P. G., Iowa City (Sioux City, Iowa).....1st Lt., A.U.S.  
 Keleher, M. F., Iowa City (Great Lakes, Ill.)...Lt. (jg), U.S.N.R.  
 Lowry, F. C., Iowa City (Sioux Falls, S. D.).....1st Lt., A.U.S.  
 McCann, J. P., Iowa City (Carlisle Barracks,  
 Penn.) .....1st Lt., A.U.S.  
 McQuiston, W. O., Iowa City (APO San Francisco,  
 Cal.) .....Capt., A.U.S.  
 Moen, B. H., Iowa City (APO 755, New York,  
 N. Y.) .....Capt., A.U.S.  
 Moon, R. E., Iowa City (APO New York, N. Y.)...1st Lt., A.U.S.  
 Odell, Lester, Iowa City (Pensacola, Fla.)...Lt. (jg), U.S.N.R.  
 Phillips, R. M., Iowa City (San Francisco, Cal.)...1st Lt., A.U.S.  
 Randall, R. G., Iowa City (Waterloo, Iowa).....Capt., A.U.S.  
 Rosenbusch, M., Iowa City (Fort Leonard Wood,  
 Mo.) .....1st Lt., A.U.S.  
 Russin, L. A., Iowa City (Fort Blanding, Fla.)...Capt., A.U.S.  
 Sawtelle, W. W., Iowa City.....Lt., U.S.N.R.  
 Schwidde, J. T., Iowa City (Carlisle Barracks,  
 Penn.) .....1st Lt., A.U.S.  
 Shand, J. A., Iowa City (Carlisle Barracks,  
 Penn.) .....1st Lt., A.U.S.  
 Shapiro, S. I., Iowa City  
 Skewis, J. E., Iowa City (Corona, Cal.)...Lt. Comdr., U.S.N.R.  
 Skouge, O. T., Iowa City  
 Waters, V. G., Iowa City (Fort Leonard Wood,  
 Mo.) .....1st Lt., A.U.S.  
 Wicks, W. J., Iowa City (Camp Crowder, Mo.)...Capt., A.U.S.  
 Williams, L. A., Iowa City (Treasure Island, Cal.)...1st Lt., A.U.S.  
 Willumsen, H. C., Iowa City (Denver, Colo.)...Capt., A.U.S.  
 Yetter, W. L., Iowa City (APO New York, N. Y.)...Major, A.U.S.  
 Zahrt, N. E., Iowa City (Keesler Field, Miss.)...Capt., A.U.S.  
 Zimmerman, H. A., Iowa City (Santa Ana, Cal.)...1st Lt., A.U.S.

#### Keokuk County

Engelmann, A. T., What Cheer (Camp Polk, La.)...Capt., A.U.S.

#### Kossuth County

Corbin, R. L., Luverne (Des Moines, Iowa).....Capt., A.U.S.  
 Kenefick, J. N., Algona (Fleet PO, San Fran-  
 cisco, Cal.) .....Comdr., U.S.N.R.

#### Lee County

Richmond, A. C., Fort Madison (San Bruno,  
 Cal.) .....Comdr., U.S.N.R.  
 Younan, Thomas, Ft. Madison.....Capt., A.U.S.

#### Linn County

Chapman, R. M., Cedar Rapids (Chicago, Ill.)...Major, A.U.S.  
 Coughlan, V. H., Coggon (Fort Snelling, Minn.)...A.U.S.  
 Leedham, C. L., Springville (Camp Campbell, Ky.)...Col., A.U.S.  
 †MacDougal, R. F., Cedar Rapids (APO 9057, New York,  
 N. Y.) .....Capt., A.U.S.  
 Noble, W. C., Cedar Rapids (Camp San Luis Obispo,  
 Cal.) .....1st Lt., A.U.S.  
 Noe, C. A., Cedar Rapids (Hot Springs, Ark.)...Major, A.U.S.  
 Smrha, J. A., Cedar Rapids (Topeka, Kan.).....Capt., A.U.S.  
 Yavorsky, W. D., Cedar Rapids (Fleet PO, San Francisco,  
 Cal.) .....Comdr., U.S.N.

#### Louisa County

De Yarman, K. T., Morning Sun (APO 74, San  
 Francisco, Cal.) .....Capt., A.U.S.  
 Tandy, R. W., Morning Sun (Oakland,  
 Cal.) .....Comdr., U.S.N.R.

#### Lyon County

Cook, S. H., Rock Rapids (Camp Chaffee, Ark.)...Major, A.U.S.  
 Moriarity, F. J., Rock Rapids (Corvallis, Ore.)...Capt., A.U.S.

#### Madison County

Chesnut, P. F., Winterset (APO 411, New York,  
 N. Y.) .....Capt., A.U.S.

#### Mahaska County

Bos, H. C., Oskaloosa.....Major, A.U.S.  
 Gillett, R. M., Oskaloosa (Fleet PO, San Francisco,  
 Cal.) .....Capt., U.S.N.  
 Zager, L. L., Oskaloosa (APO 436, New York,  
 N. Y.) .....Capt., A.U.S.

#### Marion County

Schiek, C. M., Knoxville.....Lt. Comdr., U.S.N.R.  
 Schroeder, M. C., Pella.....Capt., A.U.S.

#### Mills County

Kuitert, J. H., Glenwood (St. Cloud, Minn.).....Major, A.U.S.

#### Mitchell County

Owen, W. E., Osage (San Diego, Cal.).....Lt., U.S.N.  
 Walker, T. G., Riceville (Hutchinson, Kan.)...Lt. Comdr., U.S.N.R.

#### Monona County

†Harlan, M. E., Onawa (Fleet PO, San Francisco,  
 Cal.) .....Lt. (jg), U.S.N.R.

#### Monroe County

Bay, F. N., Albia.....Lt. Comdr., U.S.N.R.  
 Gilliland, C. H., Albia (Fleet PO, San Francisco,  
 Cal.) .....Lt. Comdr., U.S.N.

#### Montgomery County

Panzer, E. J. C., Stanton (Point Montara, Cal.)...Lt., U.S.N.R.  
 Rost, G. S., Red Oak (Halstead, Kan.).....Capt., A.U.S.  
 Sorensen, E. M., Red Oak (Jefferson Barracks,  
 Mo.) .....Capt., A.U.S.

#### Muscatine County

Kimball, J. E., Jr., West Liberty.....Major, A.U.S.  
 Norem, Walter, Muscatine (APO, Miami, Fla.)...Capt., A.U.S.

#### O'Brien County

Getty, E. B., Primghar (APO 872, New York,  
 N. Y.) .....Major, A.U.S.

#### Page County

Bauer, Frank, Shenandoah (APO New York, N. Y.)...A.U.S.  
 Blackman, Nathan, Clarinda (Ft. Benj. Harrison,  
 Ind.) .....Major, A.U.S.  
 Brush, Frederick, Shenandoah (APO New York, N. Y.)...A.U.S.  
 Burdick, F. D., Shenandoah (Denver, Colo.)...Major, A.U.S.  
 Burnett, F. K., Clarinda (Cheyenne, Wyo.)...Major, A.U.S.  
 Rausch, G. R., Clarinda (Sioux City, Iowa).....Capt., A.U.S.  
 Savage, L. W., Shenandoah (Fort Meade, Md.)...1st Lt., A.U.S.  
 Schwidde, Tilford, Shenandoah (APO New York, N. Y.)...A.U.S.

#### Plymouth County

Foss, R. H., Remsen (Homestead, Fla.).....Capt., A.U.S.

#### Pocahontas County

Blair, F. L., Jr., Fonda.....Lt., U.S.N.R.  
 Larson, J. B., Laurens (APO 720, San Francisco,  
 Cal.) .....Capt., A.U.S.  
 Patterson, A. W., Fonda (Des Moines, Iowa).....Capt., A.U.S.

#### Polk County

Barner, J. L., Des Moines (Atlanta, Ga.).....Major, A.U.S.  
 Bender, H. R., Des Moines (Carlisle Barracks,  
 Penn.) .....1st Lt., A.U.S.  
 Bond, T. A., Des Moines (Great Lakes, Ill.)...Lt. Comdr., U.S.N.R.  
 Bruner, J. M., Des Moines (El Paso, Texas)....Lt. Col., A.U.S.  
 Bruns, P. D., Des Moines (Carlisle Barracks,  
 Penn.) .....1st Lt., A.U.S.  
 Connell, J. R., Des Moines.....Major, A.U.S.  
 Corn, H. H., Des Moines (APO 9281, San Fran-  
 cisco, Cal.) .....Capt., A.U.S.  
 Downing, A. H., Des Moines (Springfield, Mo.)...Capt., A.U.S.  
 Ervin, L. J., Des Moines.....Lt. Col., A.U.S.  
 Fleek, W. L., Des Moines (Ft. Howard, Md.)...Lt. Col., A.U.S.  
 Fried, David, Des Moines (Carlisle Barracks,  
 Penn.) .....1st Lt., A.U.S.  
 Fracasse, John, Des Moines.....1st Lt., A.U.S.  
 Gerchek, E. W., Des Moines  
 Glomset, D. A., Des Moines (Clinton, Iowa)....Capt., A.U.S.  
 Graeber, F. O., Des Moines.....Lt., U.S.N.R.  
 Harris, H. L., Des Moines (Salina, Kan.).....1st Lt., A.U.S.  
 Kirch, W. A. W., Des Moines (Astoria, Ore.)...Lt. Comdr., U.S.N.R.  
 Landis, S. N., Des Moines (West Palm Beach,  
 Fla.) .....1st Lt., A.U.S.  
 La Tona, Salvatore, Des Moines.....1st Lt., A.U.S.  
 Lederman, James, Des Moines.....1st Lt., R.C.A.  
 Losh, C. W., Jr., Des Moines.....Capt., A.U.S.  
 Maloney, P. J., Des Moines (Fort Lewis, Wash.)...1st Lt., A.U.S.  
 Martin, L. E., Des Moines (Helena, Ark.).....1st Lt., A.U.S.



Matheson, J. H., Des Moines (Fleet PO, San Francisco, Cal.) .....Lt. Comdr., U.S.N.R.  
 McCoy, H. J., Des Moines .....Capt., U.S.N.R.  
 McDonald, D. J., Des Moines .....Major, A.U.S.  
 Mencher, E. W., Des Moines .....1st Lt., A.U.S.  
 Montgomery, S. A., Des Moines (Carlisle Barracks, Pa.) .....Capt., A.U.S.  
 †Morden, R. P., Des Moines (APO 635, New York, N. Y.) .....Capt., A.U.S.  
 Mumma, C. S., Des Moines (Los Angeles, Cal.) .....Major, A.U.S.  
 Nelson, A. L., Des Moines (Ft. Devens, Mass.) .....Major, A.U.S.  
 Nourse, M. H., Des Moines (Fleet PO, New York, N. Y.) .....Lt., U.S.N.  
 Overton, L. M., Des Moines (Fleet PO, San Francisco, Cal.) .....Lt. Comdr., U.S.N.R.  
 Patton, B. W., Des Moines (Camp Robinson, Ark.) .....1st Lt., A.U.S.  
 Schlaser, V. L., Des Moines (Fleet PO, New York, N. Y.) .....Lt. Comdr., U.S.N.  
 Singer, P. L., Des Moines (Camp Grant, Ill.) .....1st Lt., A.U.S.  
 Skutelyk, J. A., Des Moines (Fleet PO, San Francisco, Cal.) .....P. A. Surg., U.S.P.H.S.  
 \*Snodgrass, R. W., Des Moines (APO 9528, New York, N. Y.) .....Capt., A.U.S.  
 Sorensen, R. M., Des Moines (Topeka, Kan.) .....Lt. Col., U.S.P.H.S.  
 Stitt, P. L., Des Moines (Seattle, Wash.) .....Lt. (jg), U.S.N.R.  
 Turner, H. V., Des Moines (San Antonio, Texas) .....Capt., A.U.S.  
 Updegraff, Thomas, Des Moines (APO San Francisco, Cal.) .....Capt., A.U.S.  
 Van Hale, L. A., Des Moines (Denver, Colo.) .....Major, A.U.S.  
 Wagner, E. C., Des Moines (APO 1009, San Francisco, Cal.) .....Capt., A.U.S.

#### Pottawattamie County

Kurth, C. J., Council Bluffs (Camp Crowder, Mo.) .....Major, A.U.S.  
 Mathiasen, J. W., Council Bluffs (APO 19885-D, San Francisco, Cal.) .....Capt., A.U.S.  
 Wurl, O. A., Council Bluffs (Ft. Sam Houston, Texas) .....Lt. Col., A.U.S.

#### Sac County

Bassett, G. H., Sac City (Mobile, Ala.) .....Comdr., U.S.N.R.

#### Scott County

†Baker, R. W., Davenport (APO 511, New York, N. Y.) .....Capt., A.U.S.  
 Boyer, U. S., Davenport (Rock Island, Ill.) .....Lt. Col., A.U.S.  
 Carey, E. T., Davenport .....1st Lt., A.U.S.  
 Coleman, Tom, Davenport (APO 230, New York, N. Y.) .....Capt., A.U.S.  
 Cummins, G. M., Jr., Davenport (Fort Custer, Mich.) .....Capt., A.U.S.  
 Evans, H. J., Davenport (Daytona Beach, Fla.) .....Capt., A.U.S.  
 Gibson, P. E., Davenport (Palm Springs, Cal.) .....Major, A.U.S.  
 Hurteau, Everett, Davenport (APO 647, New York, N. Y.) .....Capt., A.U.S.  
 Hurteau, W. W., Davenport (Camp Berkeley, Texas) .....Major, A.U.S.  
 Krakauer, Max, Davenport (APO 102, New York, N. Y.) .....Major, A.U.S.  
 Kuhl, A. B., Jr., Davenport (Ft. Meade, Md.) .....1st Lt., A.U.S.  
 Perkins, R. M., Davenport (APO 121B, New York, N. Y.) .....Capt., A.U.S.  
 Rendleman, Hugh, Davenport (Fleet PO, San Francisco, Cal.) .....Lt. (jg), U.S.N.R.  
 Sheeler, I. H., Davenport (APO 350, New York, N. Y.) .....Capt., A.U.S.

#### Shelby County

McGowan, J. P., Harlan (La Jolla, Cal.) .....Comdr., U.S.N.R.

#### Sioux County

Gleysteen, R. R., Alton (Oceanside, Cal.) .....Comdr., U.S.N.  
 Oelrich, C. D., Sioux Center (Buckley Field, Colo.) .....Capt., A.U.S.

#### Tama County

Standefor, J. M., Tama (Great Lakes, Ill.) .....Lt., U.S.N.R.

#### Wapello County

Brentan, Emanuel, Ottumwa (Camp Carson, Colo.) .....Capt., A.U.S.  
 Gilfillan, C. D. N., Eldon (Battle Creek, Mich.) .....Capt., A.U.S.  
 Howell, H. P., Ottumwa (San Rafael, Cal.) .....Major, A.U.S.  
 Selman, R. J., Ottumwa (El Paso, Texas) .....Col., A.U.S.  
 Struble, G. C., Ottumwa (Cleveland, Ohio) .....Lt. Col., A.U.S.

#### Warren County

Hoffman, G. R., Lacona (Camp San Luis Obispo, Cal.) .....Capt., A.U.S.

#### Washington County

Boice, C. L., Washington (Oakland, Cal.) .....Lt. Comdr., U.S.N.  
 Droz, A. K., Washington .....Comdr., U.S.N.R.  
 Stutsman, R. E., Washington (Patuxent River, Md.) .....Lt., U.S.N.R.

#### Webster County

Burleson, M. W., Fort Dodge (Pasadena, Cal.) .....Capt., A.U.S.  
 Joyner, N. M., Fort Dodge (Columbus, Ohio) .....A.U.S.  
 †Thatcher, O. D., Fort Dodge (APO 634, New York, N. Y.) .....Capt., A.U.S.

#### Woodbury County

Cowan, J. A., Sioux City (Oklahoma City, Okla.) .....Major, U.S.P.H.S.  
 Crowder, R. E., Sioux City (Kansas City, Mo.) .....Lt. Comdr., U.S.N.R.  
 Dimsdale, L. J., Sioux City (Clinton, Iowa) .....Capt., A.U.S.  
 Heffernan, C. E., Sioux City (APO 336, San Francisco, Cal.) .....Capt., A.U.S.  
 Knott, P. D., Sioux City .....Capt., A.U.S.  
 Simonsen, Marie N., Sioux City (Philadelphia, Pa.) .....Lt., U.S.N.R.

#### Wright County

Doles, E. A., Clarion (Spokane, Wash.) .....Capt., A.U.S.

(\*) Reported missing in action.  
 (†) Reported deceased in service.  
 (‡) Reported prisoner of war.

### CLINICOPATHOLOGIC CONFERENCE

(Continued from page 161)

was not out of proportion to the generalized visceral congestion. Histologically there was considerable tubular degeneration with many dilated tubules, some necrosis and patchy regeneration of tubular epithelium.

*Liver:* The liver was considerably enlarged (2600 grams) and fatty. Histologically, it showed rather extensive fatty metamorphosis, but no appreciable necrosis.

*Other Findings:* The uterus was involuting normally and there was no evidence of postpartum infection. The remainder of the necropsy examination was essentially negative except for considerable congestion of the viscera. This was apparently agonal. Time did not permit examination of the peripheral nerves.

*Necropsy Diagnoses:* Poorly differentiated adenocarcinoma of stomach with pyloric obstruction, direct extension to pancreas and metastases to regional lymph nodes; congestion of viscera, agonal; fatty metamorphosis of liver; tubular nephritis, mild; polyneuritis, nutritional (clinical).

### ANNUAL GOLF TOURNAMENT

Des Moines Golf and Country Club

Wednesday, April 17, 1:00 p.m.

Dinner—7:00 p.m.

Ching Hi! Clung Ho!

A roaming we will go,

Over hill and over dale,

You may weep or you may wail.

Make your bets on No. 1,

Then you're off for lots of fun.

Practice up before you start,

Remember the frailty of your heart.

If the goblins have your number,

It makes no difference where you wander.

So be on hand with a smile,

Click your heels and be agile,

There'll be the usual run of this and that

For the lean and for the fat,

For the good and for the bad,

We mean, of course, the score you had.

—Golf Committee

(An old thorn returned; feel of your side.)

Make dinner reservations immediately by writing the Central Office, 505 Bankers Trust Building, Des Moines 9, Iowa. Important!

# WOMAN'S AUXILIARY NEWS

MRS. KEITH M. CHAPLER, *Chairman of Press and Publicity Committee*, Dexter, Iowa

*President*—MRS. SOREN S. WESTLY, Manly

*President-Elect*—MRS. MARION H. BRINKER, Jefferson

*Secretary*—MRS. KEITH M. CHAPLER, Dexter

*Treasurer*—MRS. HARRY W. DAHL, Des Moines

## IOWA MEDICAL PLAN'S RAPID GROWTH

Half the doctors of medicine in 19 Iowa counties, and a third of the doctors of medicine in the whole state, have signed up individually to give surgical and medical care to families or individuals with Iowa Medical Plan insurance.

This strikes us as very rapid growth for a plan only authorized by the legislature last year, and only getting under way last October.

The medical societies are dead set against government compulsory health insurance. And although this is their own "baby," free from the objections they find in the government proposals, it would be extraordinary if some of the same opposition didn't appear among the doctors to this plan.

It is insurance, after all. And for individual subscribers with less than \$1,500 a year income, or family subscribers with less than \$2,500, the Iowa Medical Service Plan does set fees. It does require a certain amount of paper work, both by doctors and by hired staff.

Nevertheless, in these few months, that many doctors have signed up. More are coming in right along. The doctors are out to prove that their opposition to government health insurance does not mean they oppose any solution to the problem of better medical care for people of low income but above the level of relief.

Editorial, "The Des Moines Register," February 21, 1946.

## HYGEIA CONTEST

The Dallas-Guthrie Medical Auxiliary is the only one in the state which registered in the national HYGEIA contest. It is classified under "Counties that reached or went over their quotas and had at least twenty-five subscription credits." Our last account was a total of fifty subscriptions with a Society membership of twenty-two for the year 1945.

## THE GOLDEN AGE OF THERAPEUTICS\*

By E. V. ALLEN

"Currently there is some criticism of the high cost of medical care. Yet the income of all physicians in the United States is about one-fifth the bill for intoxicating liquors and only one-third more than the money spent to attend movies. Is that too

much? Fifty per cent more for the treatment of illness than for the pleasure of smoking tobacco! One hundred billion dollars for a year of war to destroy men's minds and bodies; four billion dollars annually to treat us when we are sick. Millions to him who successfully removes natural resources from the ground. Seven thousand dollars a year for life to the discoverers of insulin, through whose efforts unknown millions of people will survive. Millions to him who invents a successful gadget. The Nobel prize and a few thousand dollars to him who discovered liver extract, which prevents disability and death of those with pernicious anemia. Honor and small financial return to the discoverer of penicillin, which renders many of our bacteriologic enemies impotent. No patents there to enrich the owner! Medicine spells the words kindness, loyalty, devotion, consecration—not with its lips but with its heart."

## MEDICAL HISTORY QUESTIONNAIRE

What medical people are accredited with the following achievements?

1. The discovery of radium?
2. The discovery of insulin?
3. The preventive for yellow fever?
4. The discovery of penicillin?
5. The bronchoscope?
6. The discovery of leprosy bacillus?
7. The discovery of anesthesia?
8. The discovery of smallpox immunization?
9. The discovery of tubercle bacillus?
10. The discovery of antiseptic surgery?

(Answers will be found on following page)

JOSEPH S. LAWRENCE, M.D.

*Director, Washington Office of the American Medical Association*

The Wagner-Murray-Dingell bill is in two editions this year. The first edition is last year's bill enlarged by addition of certain other phases of social legislation. Such an omnibus bill is always difficult to manage and since there were separate bills dealing with some of the accretions as S. 191, the Hospital Construction bill, S. 380, the Unemployment Insurance bill, the Senator decided to draft a new bill deleting those portions covered by separate bills. It appeared on the day the President's health message was delivered to Congress giving the appearance that it embodied his ideas. The new bill is

\*Excerpt from Article in August, 1945, issue of HYGEIA.



known in the Senate as S.1606 and in the House of Representatives as H. R. 4730.

It provides for grants of money to the states through the Public Health Service to control venereal diseases and the treatment and prevention of tuberculosis.

Grants to states for maternal and child health services including crippled children to be administered through the Children's Bureau of the Department of Labor.

Grants to states for medical care of needy persons to be administered under supervision of the Social Security Board.

Grants are to be made by the Surgeon General to nonprofit institutions and agencies engaging in research or in undergraduate or postgraduate professional education.

The primary part of the bill, however, is devoted to a program of prepaid personal health service benefits. All employed persons and their dependents may be eligible. Provision is made for hospitalization also. "Personal health service" is defined as including general medical benefit, special medical benefit, general dental benefit, special dental benefit, home nursing benefit, laboratory benefit and hospitalization benefit. The chronic sick and those afflicted with mental or nervous diseases are not covered and the Surgeon General and Social Security Board are jointly to study these conditions and make recommendations for proper legislation within three years.

Financing is disposed of as follows: "There is hereby authorized to be appropriated for the fiscal year ending June 30, 1946, and for each fiscal year thereafter, a sum sufficient for all necessary expenses. . . ."

The provision carried in the previous bill for collecting the necessary funds by deduction from wages is not repeated in this bill. It is said the provision was omitted so that the bill might be referred for study to the Committee on Education and Labor (Senator Murray, Chairman) rather than the Committee on Finance. Hearings will very likely be held in January or February. It has been variously estimated that the cost of administration might reach twelve to fifteen billion dollars annually

and probably half of this amount would go to paying salaries of employees other than those engaged in rendering medical service.

The medical fraternity is offering as a substitute a rapidly developing system of prepaid nonprofit voluntary insurance. The insured pay a nominal annual premium and have the services of the physician and hospital of their own choosing.

Let me call your attention to another bill which we think is even more socialistic, namely S. 1318, which would provide free maternal service for every woman and free medical care for the infant (Children's Bureau defines an infant as an individual under 21 years of age). This bill has a strong emotional appeal but it must be remembered that although the Government pays the bills the people through taxation must pay the Government and its army of administrators.

S. 191, the Hospital Construction bill, endorsed by us and most public health agencies will very likely be enacted. Under it the states are authorized to set up committees which will study conditions in the state and recommend where hospitals should be built and their capacity and character.

The Woman's Auxiliary can do a great deal to assist in promoting beneficial legislation and combating that which is undesirable: by speaking with your congressmen or writing to them, by discussing the bills with women of other organizations. These health bills are so far reaching and revolutionary that they deserve the careful consideration of every voting citizen.

*[An address before the Conference of Presidents and Presidents-Elect of the Woman's Auxiliary in Chicago, December 5 and 6, 1945. Reprinted from the December, 1945, issue of the Bulletin of the Woman's Auxiliary to the American Medical Association.]*

#### ANSWERS TO QUESTIONNAIRE ON PRECEDING PAGE

1. Marie and Pierre Curie
2. F. G. Banting
3. Walter Reed
4. Alexander Fleming
5. Chevalier Jackson
6. G. A. Hansen
7. W. G. T. Morton, C. W. Long, Charles Jackson, or Horace Wells
8. Edward Jenner
9. Robert Koch
10. Joseph Lister

#### SPEAKERS BUREAU RADIO SCHEDULE

WOI—Wednesdays at 2:45 P. M.

WSUI—Thursdays at 9:30 A. M.

- |             |                            |                           |
|-------------|----------------------------|---------------------------|
| April 3- 4  | Cancer                     | Arch S. McMillen, M.D.    |
| April 10-11 | Abdominal Pain in Children | Walter F. Giegerich, M.D. |
| April 17-18 | Back Injuries              | Donald C. Conzett, M.D.   |
| April 24-25 | Indigestion                | Ivan E. Brown, M.D.       |

#### REAL FRIENDSHIP

In Reading, Pennsylvania, Superintendent Jacobs, of the Reading Hospital, has developed the gift technique for sympathetic friends, with a guest card. This card entitles any friend of a sick person in the hospital to pay for one day of the patient's hospital bill, instead of flowers. The card delivered to the patient states: "Dear ———: This card indicates that you are my guest in the Reading Hospital for the day. I wish you a speedy recovery. Your friend ———"

—Hospital Topics and Buyer.

# HISTORY OF MEDICINE IN IOWA

*Edited by the Historical Committee*

DR. WALTER L. BIERRING, Des Moines, Chairman

DR. HENRY G. LANGWORTHY, Dubuque, *Secretary* DR. CHARLES L. JONES, Gilmore City

DR. CLYDE A. HENRY, Farson

DR. LESTER C. KERN, Waverly

## Comments on the Founding and Development of the College of Medicine

JOHN T. McCLINTOCK, M.D.

In September, 1945, the College of Medicine completed seventy-five years of medical instruction. There is little about the College, as it exists today, that is reminiscent of that which was present three quarters of a century ago. Not even the original title has survived, for the school was organized under the designation of Department of Medicine and the present title of College of Medicine did not become official until 1901. Let us then turn back the pages of history to those beginning days and view for a time the foundation upon which the present-day College was built.

On September 28, 1870 a local newspaper, *The State Press*, published an announcement, a part of which is here copied: "On Tuesday of last week, in the presence of a fine audience occurred the formal opening of the Medical Department of the University for the preliminary course. The regular course opens next month when the students will be present to inaugurate the serious work of the session.

"On last Tuesday culminated in victory and success a struggle that will go into history as one of the most remarkable in the educational annals of the northwest.

"The inaugural address of Dr. Peck, Dean of the Faculty, was the word of the successful general to his victorious forces occupying the field of battle won. . . ."

Success in this case was largely in the establishment of its right to exist as an integral part of the University and to become the Department of Medicine of the State University, a position long held by the Medical School at Keokuk. Its success as a medical school was still to be established. The Board of Regents had refused to

give it any financial support beyond housing it in one of the University buildings and it was only after several years of what seemed to be satisfactory attendance and efficient instruction that the Board accepted the school as a permanent part of the University. Meanwhile it met its expenses out of tuition money and voluntary contributions from the faculty.

The catalogue of 1870 describes the home of the new school in the following words: "Our school edifice is a capacious building, with lecture rooms well ventilated and heated and admirably adapted to meet the requirements of the students." The building referred to was known as South Hall and was located just south of Old Capitol. It was a fair-sized, three-story structure. Originally built as a dormitory, at this time it was occupied by class rooms and private living quarters for some of the faculty. The south end of the first floor was remodeled into an amphitheater which seated about 213 persons, and an anteroom for the faculty. Underneath in the basement an anatomic laboratory was installed. Thus, the medical school occupied only a very small part of the "capacious building." Other than the anatomic dissecting room there were no laboratories. Pathology, Bacteriology, Biochemistry and Pharmacology were not yet included in the medical course, while laboratory work in chemistry was optional. The possession by the school of a low powered microscope was sufficient grounds for the announcement of practical work in Physiology. Microscopic Anatomy was at that time a part of the physiologic course.

In the amphitheater all six hours of the daily didactic instruction were given. No great effort was made to cover a subject in a systematic manner. Recitations were supposed to be held each day over the work given the preceding day but

These comments are excerpts from the articles on the history of the College of Medicine which were published in the February and July, 1945, issues of *The Medical Bulletin*. The article in the July issue was in commemoration of the Seventy-Fifth Anniversary of the founding of the College of Medicine.



examinations were held only for those who had completed the two years of required work and had applied for graduation. Clinical demonstrations and such surgical operations as were then performed were also carried on in the one amphitheater. Asepsis was not yet an accepted goal to be attained by every possible means, so that the incongruity of a major operation in such surroundings was not in evidence. The story is told that the one gown worn by the chief surgeon hung on its peg behind the faculty door from week to week during an entire school year without the service of a laundry. Since there was no hospital, some member of the faculty or perhaps the janitor was called upon to see that the patients were safely returned to their homes or hotel rooms.

The picture we have given above seems far from being one of a well-equipped, efficient teaching unit. Nevertheless the catalogue of 1870 was fully justified in its statement that the rooms were well adapted to the needs of the student and that efficient medical instruction would be given. It was better than in many of the medical schools of that day. To view such a picture and say it was good should help one more fully to realize the progress which has been made in the medical sciences during the past seventy-five years.

Success of such an institution was not determined by its building and equipment but by the men who made up the instructional staff. Dr. W. F. Peck was the major force in securing the favorable action for the establishment of the Medical Department in the face of most bitter antagonism. He was also responsible for the selection of the men who constituted the first faculty. He chose his men wisely. Apparently having in mind the intimate relationship of the school with the rest of the University he secured men so far as possible who were not only well versed in medicine but who would be on an intellectual level with their colleagues in the other divisions of the University. As was the custom in that day, the men were selected from among those in active medical practice, with the exception of two of the professors who accepted appointments. Nine professors made up the faculty. Dr. W. F. Peck, Dean of the Department, was Professor of Surgery; W. S. Robertson, Theory and Practice; J. C. Shrader, Gynecology; John F. Kennedy, Obstetrics; James H. Boucher, Anatomy; W. D. Middleton, Physiology; Gustavus Hinrichs, Chemistry; John H. Dillon, Medical Jurisprudence; P. J. Farnsworth, Materia Medica and Therapeutics. Dr. Kennedy did not accept his appointment and the Chair of

Obstetrics was then combined with that of Gynecology.

The opening of a medical school in 1870 was not an unusual event. In the twenty years preceding 1860, fifty schools were organized and between 1860 and 1870 twenty more were started and most of them in the Midwest. However, for a medical school to open on a co-educational basis was both new and startling. That was the Victorian age and a mingling of the sexes in a medical course was not in keeping with the rigid code of the day. Regardless of the storm of protests which arose throughout the country there was nothing the faculty could do about it. In establishing the University it was explicitly stated that the facilities were available to men and women alike and this provision extended to the professional colleges. Thus, against the original plan and wishes of the faculty, a resolution was passed admitting women and promising that "good language would be used and proper conduct maintained."

Students were admitted without any special pre-medical schooling. The course consisted of lectures and amphitheater clinics extending over a period of sixteen weeks. For graduation, attendance at two such courses was required but for those who had had two years of medical practice, one course of lectures was enough. A final examination over all subjects studied and the presentation of an acceptable written thesis were also required. Five persons applied for graduation at the end of the first year. Three only, Isaac L. Potter, Nathan H. Tullis and Homer R. Page, were able to qualify and graduate at the commencement exercises held on March 1, 1871.

One event occurred during the first year to mar the otherwise even course of the new department. A body disappeared from a newly made grave in the local cemetery and although an immediate search of the medical building failed to reveal the stolen body, the public was convinced that the medical school was involved. The Hon. John P. Irish, a local newspaper editor, former University Trustee and a strong supporter of the Medical Department, was called upon to clear up the mystery. A night or so later the body mysteriously reappeared in a coffin placed outside the back door of a local undertaking establishment. Public sentiment, however, called for some drastic action. A notebook belonging to Dominick Bradley, janitor for the medical building and coachman for Dr. Boucher, Professor of Anatomy, was found near the desecrated grave. This evidence was sufficient to bring about the departure of Dr. Boucher and Mr. Bradley from Iowa City. Dr.

Clapp, a local physician, was appointed to fill the Chair of Anatomy and William (Billy) Green became janitor, a position he held for nearly thirty years. While he carried the title of "janitor," Billy did little of the work which was generally associated with that title. He was a general assistant to all departments, had charge of the anatomic material, and was a regular attendant at all clinics. He kept well posted on all the affairs of the Medical Department but when questioned he always replied in a soft whispering voice, "I don't know."

During the first three years the school was without any hospital but by 1873 the administration considered the school sufficiently well established to permit some expansion. The faculty, fully aware of the need, petitioned the Regents to remodel, for hospital use, the building known as Mechanics Academy located on the east side of Linn Street between Iowa Avenue and Jefferson Street. Permission was granted but the necessary funds had to be secured from private sources. A hospital was not looked upon as a desirable addition to the city by all citizens and considerable difficulty was encountered in securing the needed funds. In the fall when work was completed the committee in charge found it necessary to appeal to the Regents for the sum of \$400 to cover the deficit. Sisters of Mercy from Davenport, under the direction of Mother Baremo, undertook the responsibility of running the hospital and furnishing the nursing service while the University was to supply heat, light, and make necessary repairs. This dual arrangement existed, not without some misunderstanding, until the Sisters of Mercy in 1886 set up their own hospital in the Dostal residence located on the northwest corner of the block where the present Mercy Hospital now stands. The medical faculty continued to have staff privileges and clinics were held in an amphitheater built in an old barn standing some distance away from the main building but connected with it by a covered passageway. New Mercy, as it was then called, furnished the clinical facilities for the school until 1898. Old Mercy on Linn Street was continued as a women's hospital under the general supervision of Dr. Shrader until it also was torn down to give way to the first University Hospital, now the building known as East Hall.

By the early eighties the student enrollment was nearing the 200 mark and it was quite apparent that more commodious quarters were needed. Dr. J. C. Shrader, a member of the faculty and State Senator from this district, was able to secure a State appropriation of \$30,000 for a medical building. Construction was started in the spring of 1882 and the building was fully occupied the

following year. As originally built, the red brick structure, located on the Washington Street side of the main campus and on a line south of Old Capitol, contained two large amphitheaters, each holding 300 to 400 persons. A library, recitation room, and a small laboratory for microscopic work took up the rest of the space in the building except for the dissecting room which occupied the entire top floor. A few years later the west amphitheater was altered so as to provide space for a pathologic laboratory. This building served the Medical Department until it was destroyed by fire in the spring of 1901.

The inadequate facilities of Mercy Hospital as a teaching unit and the difficulties which arose from a divided responsibility in the control and maintenance of the plant, made it desirable to secure a different solution to the ever troublesome problem of proper clinical instruction. The legislative committee, after an investigation in 1888, had stated that a new hospital was needed but it was nearly ten years later before definite action was taken. In 1889 and 1891 the request of the Regents for an appropriation for hospital construction failed to receive approval. In the fall and winter of 1895-96 an extensive campaign was put on to secure favorable action from the General Assembly. As a result a 1/10 mill State tax extending over a five-year period was established, the proceeds to be used for University Buildings at the discretion of the Regents. The first building constructed with funds supplied by this tax was the University Hospital. Begun in the summer of 1896 it was put into service in January, 1898 at a cost of \$55,000. The original building consisted of the center and southwest wing of what is now known as East Hall. It had accommodations for about 100 beds. Three additions were added in succeeding years, increasing its capacity to about 350 beds and making provision for such new services as radiology, clinical laboratories, hydrotherapy, and special operating rooms. This building with its several additions provided the clinical work until the present medical unit was completed in 1928. In preparation for the opening of a hospital under the full control of the University, a nursing school was organized in 1897 and Miss Jenny S. Cottle was appointed as superintendent of the training school and placed in charge of the nursing service.

The destruction of the medical building by fire in 1901 cannot be looked upon as an unmitigated misfortune. There was loss of much valuable material which could not be replaced, but the way was then open for securing a building better fitted to laboratory teaching. The new buildings constructed at the corner of Dubuque and Jefferson



Streets were planned in what then seemed to be a very generous provision for the basic sciences. However, new fields requiring laboratory space opened up, basic research started to grow and required space. It was not long until the new quarters became overcrowded and inadequate.

In planning the Jefferson Street building no provision had been made for a laboratory in the new and rapidly developing subject of Pharmacology. When Dr. O. H. Plant of Pennsylvania Medical College was appointed to succeed Dr. Chase in Pharmacology, it was with the understanding that steps would be taken to finish the medical unit by constructing a third building on the ground just south of the Jefferson Street structure. University funds were not available and application was made to the Rockefeller Foundation, the General Educational Board and the Carnegie Foundation, since they had all extended financial aid in support of better medical education. In a preliminary conference with Dr. Abraham Flexner, who had expressed his great interest and gratification in the progress the school had made in the reorganization following his critical report in 1910, he suggested that instead of enlarging the existing plant a complete new unit be constructed on the west campus. Dr. Flexner offered his assistance to secure favorable action by the Boards for such a program. New requests were formulated, but without going into details regarding the volumes of correspondence that ensued, the charts and report that were prepared, the many visits between New York and Iowa City that took place, it is sufficient to say that the Carnegie Foundation declined to take part in the project since its policy was not to contribute to State supported institutions. After much investi-

gation the General Education Board and the Rockefeller Foundation agreed to contribute an equal share of the two and one-half millions that had been asked, provided the State appropriate an equal amount. Announcement of this gift was made in December, 1922, and with but few exceptions it was given hearty support in all quarters of the State. On the following April 4 the Iowa General Assembly approved a bill appropriating \$450,000 a year for five years as the State's part in the project. Great credit must be given to Mr. Boyd, Dr. Flexner, and President Jessup for their untiring effort in bringing about the successful outcome of this unusual and extensive program. While in the announcement of the gift the statement was made that it was "without any strings attached," somewhere in the discussions the question of the adoption by the College of a full-time clinical faculty was considered but as yet this has not been fully accomplished. With appropriate ceremony on June 17, 1924, Governor N. E. Kendall turned the first spade full of sod for the new building and in the fall of 1928 the formal dedication occurred.

Much could be written concerning other subjects of great importance and interest in the story of the development of the College if space and the scope of this article permitted. Medicine and medical practice have undergone great changes in the past seventy-five years. Empiricism has given way to science as a basis for diagnosis and treatment. Medical education has necessarily made many changes in keeping with the advances which have been made. The College of Medicine has recognized its responsibilities and has responded well to the ever increasing demands which have been made of it.

## FRED M. SMITH, M.D.

1888-1946

### AN APPRECIATION

The many Iowa friends of Dr. Fred M. Smith were shocked and grieved to learn of his sudden death in Iowa City, February 23, 1946. It seems particularly tragic to have him taken from our midst at the height of a career of great usefulness and leadership in medical education and clinical research. Through his prominence in the field of cardiovascular diseases he extended the prestige of Iowa Medicine and our University Medical School far beyond the borders of this, his adopted state.

Dr. Smith was born in Yale, Illinois, May 31, 1888. He received the degree of bachelor of

science at the University of Chicago, and doctor of medicine at Rush Medical College in 1914. Following an internship at Presbyterian Hospital, Chicago, he successfully served as assistant instructor and assistant professor of medicine at Rush Medical College. Here he came under the tutelage and inspiring direction of that master American clinician, Dr. James B. Herrick. He was closely associated with Dr. Herrick in clinical research, particularly the experimental obstruction of the coronary arteries and electrocardiographic studies. The classic experiments of Fred Smith published in 1918 furnished the first definite evi-

dence that ligation of the left coronary artery in the dog produced myocardial lesions and a resulting negative T wave in one or more leads of the electrocardiogram. After coming to Iowa his experimental and clinical researches on the therapeutic use of the xanthine series in the treatment of coronary artery disease were equally notable contributions to our knowledge of this disease.

Dr. Smith came to the University of Iowa in 1924 as professor and head of the department of theory and practice of medicine and clinical medicine, succeeding Dr. Campbell P. Howard, who had been called to the professorship of medicine, Faculty of Medicine, McGill University, Montreal.



FRED M. SMITH, M.D.

Dr. Smith was the sixth incumbent in the Chair of Medicine of the seventy-five years of the College of Medicine history: William S. Robertson served from 1870 to 1887; William D. Middleton from 1887 to 1891; Lawrence W. Littig from 1891 to 1903; Walter L. Bierring from 1903 to 1910; Campbell P. Howard from 1910 to 1924; Fred M. Smith from 1924 to 1946, thus having the longest term of service in that position.

During this period a large number of important contributions were published in the different fields of internal medicine by Dr. Smith and his associates, Drs. Baldrige, Korns, Greene, Fowler, DeGowin, Paul, Fuller, and Rathe. He edited the chapter on coronary diseases in "Cyclopedia of

Medicine," and Musser's "Text Book on Medicine." Since January 1, 1938, he had been Editor-in-Chief of the *American Heart Journal*.

Dr. Smith served as a First Lieutenant in the Army Medical Corps in World War I. He was a fellow and member of leading medical and scientific societies, as the American College of Physicians, American Medical Association, Association of American Physicians, American Society for Clinical Investigation, American Physiological Society, Society of Experimental Biology and Medicine, and the Chicago Society of Internal Medicine.

He had represented the section of practice of medicine as a member of the House of Delegates, American Medical Association, since 1940, and at the 1945 session was chairman of the important reference committee on medical education and hospitals.

He was chairman of the section of medicine of the Iowa State Medical Society in 1934, as well as being chairman of the pneumonia committee. During the war period he served on the committee on medicine of the Division of Medical Sciences, National Research Council. He was a member of Sigma Xi honor scientific and Alpha Omega Alpha honor medical societies, as well as a member of Phi Rho Sigma and Phi Delta Theta fraternities.

Dr. Smith was married to Helen Louise Bushee of Chicago on May 9, 1917. Surviving him are the widow, a daughter, Barbara (Mrs. Dan O. Newland, Hartford, Connecticut), two sons, Fred Richard, a graduate student, and James Herrick, a premedical student at the University.

Dr. Smith succumbed to coronary artery disease, to the knowledge of which he had contributed so much.

We shall miss his genial fellowship, and above all his inspiring leadership in scientific medicine.

—WALTER L. BIERRING, M.D.

## MEDICAL HISTORY OF WAPELLO COUNTY

by

Clyde A. Henry, M.D., Farson

The next installment, a continuation of the present membership of the Wapello County Medical Society, will appear in the May issue of the Journal.



# THE JOURNAL BOOK SHELF

## BOOKS RECEIVED

**PERSONALITY FACTORS IN COUNSELING**—By Charles A. Curran, Ph.D., St. Charles College, Columbus, Ohio; Preface by MICHAEL J. READY, Bishop of Columbus; Introduction by CARL R. ROGERS, Professor of Psychology, University of Chicago. Grune & Stratton, New York, 1945. Price, \$4.00.

**SYNOPSIS OF THE DIAGNOSIS OF THE SURGICAL DISEASES OF THE ABDOMEN**—By John A. Hardy, M.D., El Paso, Texas. Second edition. The C. V. Mosby Company, St. Louis, 1945. Price, \$5.00.

**THE 1945 YEAR BOOK OF PEDIATRICS**—Edited by Isaac A. Abt, M.D., Professor of Pediatrics, Northwestern University Medical School. With the Collaboration of ARTHUR F. ABT, Comdr., M.C., U.S.N.R., Associate Professor of Pediatrics, Northwestern University Medical School. The Year Book Publishers, Chicago, 1946. Price, \$3.00.

**VD MANUAL FOR TEACHERS**—By Samuel D. Allison, M.D., Director of Bureau of Venereal Diseases, Board of Health, Territory of Hawaii, and JUNE JOHNSON, B.S., M.S., School Health Education Administrator, Board of Health, Territory of Hawaii. Emerson Books, Inc., New York, 1946. Price, \$2.00.

**HOWELL'S TEXTBOOK OF PHYSIOLOGY**—Edited by John F. Fulton, M.D., Sterling Professor of Physiology, Yale University School of Medicine. Fifteenth edition. W. B. Saunders Company, Philadelphia, 1946. Price, \$8.00.

**PRINCIPLES OF DYNAMIC PSYCHIATRY**—By Jules H. Masserman, M.D., Division of Psychiatry, Department of Medicine, University of Chicago. W. B. Saunders Company, Philadelphia, 1946. Price, \$4.00.

**THE CARE OF THE AGED (Geriatrics)**—By Malford W. Thewlis, M.D., Attending Specialist, General Medicine, United States Public Health Hospitals, New York City; Attending Physician, South County Hospital, Wakefield, R. I.; Director, Thewlis Clinic; Special Consultant, Rhode Island Department of Public Health. Fifth edition, thoroughly revised. The C. V. Mosby Company, St. Louis, 1946. Price, \$8.00.

**THE 1945 YEAR BOOK OF GENERAL SURGERY**—Edited by Everts A. Graham, M.D., Professor of Surgery, Washington University School of Medicine, Surgeon-in-Chief of the Barnes Hospital and of the Children's Hospital, St. Louis. The Year Book Publishers, Chicago, 1946. Price, \$3.00.

## BOOK REVIEWS

### DISEASES OF THE BREAST

By Charles F. Geschickter, M.D., Lt. Comdr., M.C., U.S.N.R., Director of the Francis P. Garvan Cancer Research Laboratory, Pathologist, St. Agnes Hospital, Baltimore; with Special Section on Treatment in Collaboration with MURRAY M. COPELAND, M.D., Instructor in Surgery, Johns Hopkins Medical School, Visiting Surgeon and Assistant Oncologist, University Hospital, University of Maryland Medical School, Visiting Oncologist, Baltimore City Hospital. Second edition. J. B. Lippincott Company, Philadelphia, 1945. Price, \$12.00.

Almost 10 per cent of all cancer deaths in Iowa are due to cancer of the female breast. There are probably around 1,000 breast cancers under treatment in our state, and cancer is only one of the many diseases of this organ for which a physician is consulted. Surely, then, there should be interest in a volume which includes in comparatively brief scope all the information one could glean from reading volumes of surgery, pathology, and radiology.

This is an attractive volume, handsomely bound, copiously illustrated, and competently indexed. It begins with the physiology of the mammary gland and devotes a whole chapter to the endocrine influences which play so important a role in the development of the gland and in its pathology as well. Ample consideration is given the behavior of the breast in pregnancy, lactation, and the puerperium.

The various diseases to which the breast is susceptible are well described with relation to their etiology, diagnosis, and modern treatment. The statistical data on which prognosis can be based and the tables of end results of treatment are especially valuable. The endocrine aspects of chronic cystic disease receive due emphasis in a special chapter and the last chapter, devoted to mechanism of tumor

formation, is practically new in this edition and elaborates the most modern concept of cancer genesis.

To anyone interested in cancer, and what physician can fail to be, this is an invaluable work. Nowhere is so much authentic information available in so complete and concise a form.

E. G. Z.

### HEMATOLOGY

For Students and Practitioners

By Willis M. Fowler, M.D., Professor of Internal Medicine, University of Iowa, Iowa City. With a chapter by ELMER L. DE-GOWIN, M.D., Assistant Professor of Internal Medicine, University of Iowa, Iowa City. Paul B. Hoeber, Inc., New York, 1945. Price, \$8.00.

This excellent volume is the outgrowth of the series of lectures on hematology given the students at the State University of Iowa College of Medicine by Dr. Fowler and his associates. Hematology is presented as a part of internal medicine rather than as a technical science standing alone, and this sound principle is always kept before the reader.

The subject is logically developed by chapters, each one being plainly identified as a lecture by the calm, clear, didactic style with its freedom from controversial theories and speculations and its constant emphasis on essentials. Beginning with the development and physiology of the blood forming organs, the text goes on to discuss the hematologic diseases, the hematologic manifestations of infections and internal diseases, and hematologic manifestations in childhood.

Dr. DeGowin has contributed a chapter on blood transfusions and derivatives, giving also some of the principles incident to preserving blood for its

use in blood banks. There is a fine section on hematologic technic and an adequate index.

The illustrations include six color plates by Lee Allen, and many photomicrographs.

This book is highly recommended to all students and practitioners. It represents a real contribution from the authors, for it is one of the best, if not the best, introduction to hematology to appear.

D. J. H.

#### CLINICAL PARASITOLOGY

By Charles Franklin Craig, M.D., Colonel, A.U.S. (Retired), Formerly Director, Army Medical School, and Assistant Commandant, Army Medical Center, Washington, D. C., Emeritus Professor of Tropical Medicine in the Tulane University of Louisiana, New Orleans, Louisiana; and ERNEST CARROLL FAUST, Ph.D., Professor of Parasitology in the Department of Tropical Medicine, Tulane University of Louisiana, Consultant to the Secretary of War, Army Epidemiologic Board on Epidemic and Tropical Diseases, Consultant U. S. Public Health Service, Honorary Consultant, Army Medical Library. Fourth edition, thoroughly revised. Lea & Febiger, Philadelphia, 1945. Price, \$10.00.

This is the fourth edition of this text on parasitology and in it have been incorporated the latest developments and advancements in the field of parasitology and tropical diseases. It is comprehensive and authoritative in these fields and presents the material in an interesting and readable fashion, stressing particularly the clinical aspects of the diseases.

An extensive bibliography on all phases of the subject is presented in a separate section, and a particularly valuable technical appendix is included in which laboratory and diagnostic procedures are given in detail. In the reviewer's opinion, this arrangement has many advantages.

This is an excellent text on parasitology which, with the present interest in this subject, would be a valuable addition to any practitioner's library.

W. M. F.

#### CLASSIC DESCRIPTIONS OF DISEASE

By Ralph H. Major, M.D., Professor of Medicine, University of Kansas School of Medicine. Third edition, revised and enlarged. Charles C. Thomas, Publisher, Springfield, Illinois, 1945. Price, \$6.50.

The third edition of Major's "Classic Descriptions of Disease" is admirably suited to the amateur bibliophile, the teacher, and anyone interested in the science of medicine. It deserves more popularity than the more ponderous "History of Medicine" by Garrison. Major quotes in detail from early descriptions and investigations in most fields of medicine and sprinkles comments and pictures between the

quotations to enliven the passages. The selections on each subject are well chosen and are in sufficient number to interest varied types of readers. Principal topics are: infectious diseases, diseases of metabolism, lead poisoning, diseases of the circulatory system, diseases of the blood, kidney diseases, respiratory diseases, deficiency diseases, allergic diseases and diseases of the digestive tract. A bibliography has been added at the end of the book for the benefit of reference-seekers. The only criticism of the reviewer is that the section on syphilis seems to be of unwarranted length.

In general, the book is excellently written and arranged, and should be available as a reference to all doctors having an interest in the fundamentals of disease processes.

D. A. G.

#### MODERN UROLOGY FOR NURSES

By Sheila Maureen Dwyer, R.N., Director School of Nursing and Nursing Service, Southampton Hospital, Southampton, New York; and GEORGE W. FISH, M.D., Associate Professor of Urology, College of Physicians and Surgeons, Columbia University, New York City. Foreword by HELEN YOUNG, R.N., Director-Emeritus, School of Nursing and Nursing Service, Columbia-Presbyterian Medical Center, New York City. Second edition, thoroughly revised. Lea & Febiger, Philadelphia, 1945. Price, \$3.25.

This volume is an excellent textbook for the student nurse, as well as a handy reference book for the graduate in urologic nursing or the nurse employed in a urologist's office.

The first chapter shows a convenient floor plan and the necessary equipment for setting up a urologic department. The succeeding chapters include a clear and comprehensive course in urologic nursing procedures, preoperative and postoperative care, and an explicit chapter on the anatomy of the urologic tract and the usual diseases thereof. The last chapter deals with a teaching program for the instructor. The book is well illustrated, enabling the student to become familiar on sight with the various dressings and instruments in this type of nursing.

This text would also be valuable for the student in urologic surgery, since it covers the necessary instruments for each procedure, the care and sterilization of urologic instruments, and the draping and positions of patients for urologic surgery.

M. E. O'D.

#### SAVE MEDICAL JOURNALS

Dr. Jeannette Dean-Throckmorton, Librarian of the Iowa State Medical Library, located in the Historical Building in Des Moines, is most anxious to receive old copies of medical journals. They should be sent direct to her.



## SOCIETY PROCEEDINGS

### Black Hawk County

The regular monthly meeting of the Black Hawk County Medical Society was held in Waterloo at Black's Tea Room Tuesday, March 19, at 6:30 p.m. John H. Randall, M.D., Professor of Obstetrics and Gynecology at the State University of Iowa College of Medicine, spoke before the group on Vaginal Bleeding.

C. A. Waterbury, Jr., M.D., Secretary

### Butler County

The Butler County Medical Society and Auxiliary met in Allison Monday evening, February 11, at the home of Dr. and Mrs. Frank F. McKean. Prior to the meeting a dinner was served at an Allison cafe.

### Decatur County

The regular meeting of the Decatur County Medical Society was held at the Decatur County Hospital in Leon Tuesday evening, March 5, at eight o'clock. The scientific program was a discussion of Plastic Repair of Extremities presented by Charles N. Hyatt, Jr., M.D., of Humeston.

W. N. Doss, M.D., Secretary

### Des Moines County

Officers elected to serve the Des Moines County Medical Society during 1946 include Dr. John C. McKitterick, president; Dr. Wayne R. Lee, vice president; Dr. Robert H. Crawford, secretary-treasurer; Dr. Frank G. Ober, delegate; and Dr. George D. Jenkins, alternate. All officers are of Burlington.

### Greene County

The Greene County Medical Society and Auxiliary held a joint meeting in Jefferson Thursday evening, March 21, at six-thirty o'clock at the Gem Tea Room. William A. Castles, M.D., of Rippey addressed the group on Tropical Diseases.

J. R. Black, M.D., Secretary

### Johnson County

The Johnson County Medical Society held a joint meeting with the Johnson County Dental Society in Iowa City at Hotel Jefferson Wednesday, March 6, at 6:15 p.m. The scientific program, presented by the Dental Society, consisted of a discussion of Oral Surgery by Dr. R. A. Fenton of the Dental College.

R. H. Flocks, M.D., Secretary

### Lee County

The Lee County Medical Society is sponsoring a program to be presented in Fort Madison at the Anthes Hotel Wednesday afternoon, April 3, by members of the faculty of the St. Louis University School of Medicine. The program will open at 3:30 p.m. and dinner will be served at 6:30 p.m. Doctors

scheduled to present addresses are Goronwy O. Broun, Robert M. O'Brien, and Jerome I. Simon.

### Linn County

Members of the Linn County Medical Society met in Cedar Rapids at the Roosevelt Hotel Thursday evening, March 14, for their regular monthly meeting. The guest speaker of the evening was Robert L. Jackson, Associate Professor of Pediatrics at the State University of Iowa College of Medicine.

### Mahaska County

At the annual meeting of the Mahaska County Medical Society, held in Oskaloosa at the Blue Mill Friday noon, February 22, the following officers were elected: Dr. Geoffrey W. Bennett, president; Dr. Kenneth M. Lemon, vice president; and Dr. Walter V. Campbell, secretary. All officers are of Oskaloosa.

### Muscatine County

Members of the Muscatine County Medical Society met at a luncheon in Muscatine at Hotel Muscatine Wednesday, February 27. The guest speaker was Leon H. Flancher, M.D., of the State Department of Health, who discussed the miniature chest film program which is to be conducted in Iowa counties in the interest of early discovery of tuberculosis cases.

### Page County

The Page County Medical Society held its regular monthly meeting Thursday evening, February 28, at the Delmonico Hotel in Clarinda. An excellent discussion of Surgical Lesions of the Neck was presented by Charles W. McLaughlin, M.D., of Omaha.

J. F. Aldrich, M.D., Secretary

### Polk County

The regular scientific meeting of the Polk County Medical Society was held in Des Moines Wednesday evening, March 20, at six-thirty o'clock at the Des Moines Club. The program consisted of an address on War Neurosurgery by Walter D. Abbott, M.D., of Des Moines, and a Resume of Surgical Work Done in Navy Hospitals by Lester D. Powell, M.D., of Des Moines.

E. W. Anderson, M.D., Secretary

### Scott County

The Scott County Medical Society held its regular monthly meeting in Davenport at the Lend-A-Hand Club Tuesday evening, March 5, at six o'clock. The scientific program, devoted to plastic surgery, was presented by Leo H. LaDage, M.D., who discussed Principles of Plastic Surgery, and Aral C. Sorenson, M.D., who showed lantern slides demonstrating plastic work. Dr. LaDage and Dr. Sorenson are Davenport physicians recently returned from military service.

J. H. Sunderbruch, M.D., Secretary

### Woodbury County

The March meeting of the Woodbury County Medical Society was held in Sioux City Thursday, March 21, at 6:30 p.m. at the Martin Hotel. The guest speaker of the evening was Harold A. Quint, M.D., of Evanston, Illinois, who spoke on Varicose Veins. R. D. Bernard, M.D., of Clarion, president of the State Society, was a guest of the evening and following the scientific program discussed current problems with the group.

R. C. Mugan, M.D., Secretary

### PERSONAL MENTION

The JOURNAL is pleased to announce the release of the following physicians from active military duty:

Dr. Carroll O. Adams has just recently returned to Mason City where he will resume his medical practice after more than three years of active duty in the Army Medical Corps. Dr. Adams, a Major, was serving in the Madigan General Hospital at Fort Lewis, Washington, at the time of his release.

Dr. Charles A. Angell has received his discharge from the Army and plans to resume his practice in Des Moines in the near future. He entered the Army Medical Corps in October 1942 and just recently returned from service in the European Theater. Dr. Angell held the rank of Captain at the time of his release.

Dr. George I. Armitage has resumed his practice in Murray following his release from active service with the Army Medical Corps. Dr. Armitage, a Captain at the time he received his discharge, served in the European Theater.

Dr. Richard G. Bausch of Bellevue has received his discharge from the Army Medical Corps and at present is taking specialty training at Providence Hospital in Detroit, Michigan. Dr. Bausch held the rank of Captain at the time of his release.

Dr. Geoffrey W. Bennett has resumed his practice in Oskaloosa following his release from active duty in the Army Medical Corps. He was in military service more than three years, the latter part of which he served as a Lieutenant Colonel in the Pacific Theater.

Dr. Paul W. Berney, who practiced in Cedar Rapids prior to his entry into military service, has received his discharge. Dr. Berney, a Major at the time of his release, was on active duty with the Army Medical Corps for more than three years.

Dr. Philip L. Bettler has resumed his medical practice in Sioux City in the Davidson Building after more than three years of service in the Army Medical Corps. Dr. Bettler, who held the rank of Lieutenant Colonel, recently returned from the Pacific Theater.

Dr. John W. Bickley has reopened his office in Waterloo after forty-two months of service with

the Army Medical Corps, of which twenty-seven months were spent in the Central Pacific. Dr. Bickley held the rank of Captain at the time of his release.

Dr. Raymond G. Bird has reopened his office in Clarion following his release from active duty in the Medical Corps of the Navy. Dr. Bird, who held the rank of Commander at the time he was placed on inactive status, was in service more than forty months. He returned from the Pacific Theater last summer.

Dr. Carl V. Bisgard has received his release from active duty with the Navy Medical Corps and is resuming his medical practice in Harlan. Dr. Bisgard, a Commander at the time he was placed on inactive status, just recently returned from the Pacific Theater.

Dr. Henry Boe has returned to Sioux City and resumed his medical practice in the Davidson Building. Dr. Boe, a Captain in the Army Medical Corps at the time he received his discharge, has been in service more than three years.

Dr. Clifford V. Bowers, who practiced in LeMars before entering military service, has now received his discharge from the Army Medical Corps and has located in Sioux City where he is associated with Dr. Hubert H. Burroughs in the Davidson Building. Dr. Bowers was on active duty for three years, part of which time was spent overseas.

Dr. Wayne B. Brown has just recently received his discharge from the Army Medical Corps and has resumed his duties at the State Hospital in Mount Pleasant. He has been on active duty for more than three years and at the time of his release held the rank of Major.

Dr. John J. Buchanan has been placed on inactive status with the Medical Corps of the Navy and plans to resume his practice in Milford early in April. He has been on active duty for more than three years and at the time of his release held the rank of Lieutenant Commander.

Dr. Jerome C. Burke has received his discharge from the Army Medical Corps and has resumed his medical practice in Clinton. Dr. Burke entered military service more than three years ago.

Dr. Hugh G. Cleary, who was located in Fort Madison prior to reporting for active duty with the Army Medical Corps, has received his discharge. Dr. Cleary held the rank of Captain at the time of his release.

Dr. J. Lawrence Cochran has returned to Carroll and resumed his medical practice after being released from active duty with the Medical Corps of



the Army Air Forces. Dr. Cochran served forty-four months as Flight Surgeon with the 13th Air Force.

Dr. Robert A. Culbertson, who practiced in St. Ansgar before reporting for active duty with the Army Medical Corps, has just recently returned from the Pacific Theater and has received his release from service. Dr. Culbertson held the rank of Lieutenant Colonel.

Dr. Willard V. Ergenbright of Atlantic has received his discharge from the Army Medical Corps after more than three years of active duty. Dr. Ergenbright, who recently returned from the Pacific Theater, held the rank of Captain at the time of his release.

Dr. Roman J. Fisch has received his discharge from the Medical Corps of the Army Air Forces and is resuming his practice in LeMars about the first of April. Dr. Fisch went on active duty in August 1943 and held the rank of Captain at the time of separation.

Dr. Merriam Gearhart of Springville has received his release from active duty with the Army Medical Corps. Dr. Gearhart was in service more than three years and held the rank of Lieutenant Colonel at the time he was separated.

Dr. Robley R. Goad has been released to inactive duty in the Medical Corps of the Navy after four years of military service and plans to resume his practice in Muscatine in the near future. Dr. Goad held the rank of Captain at the time he was placed on inactive status.

Dr. James W. Graham has resumed his medical practice in Sioux City, with offices in the Frances Building, following his release from active duty in the Navy Medical Corps. Dr. Graham held the rank of Commander at the time of his release.

Dr. Amandus H. Grau has returned to Denison and reopened his office for the general practice of medicine after having been released from active duty with the Medical Corps of the Navy. At the time he was placed on inactive status Dr. Grau held the rank of Commander.

Dr. Frederick O. Graeber, who was located in Des Moines prior to reporting for active duty with the Medical Corps of the Navy, has now been placed on inactive status. Dr. Graeber entered the service almost four years ago and at the time of his release held the rank of Lieutenant.

Dr. Donald M. Harris has received his discharge from the Army Medical Corps and has resumed his duties as City Health Inspector in Sioux City. Dr. Harris entered the armed forces in May 1944 and held the rank of Captain at the time of his release.

Dr. Howard J. Hartman has resumed his medical practice in Waterloo after forty-one months of service in the Army Medical Corps, sixteen months of which were spent in Hawaii and New Guinea. Dr. Hartman held the rank of Major at the time he received his discharge.

Dr. John T. Hecker of Cedar Rapids has just recently returned to the States and received his discharge from active duty in the Army Medical Corps. Dr. Hecker, a Captain at the time of his release, plans to resume his medical practice in the near future with offices in the Higley Building.

Dr. Walker B. Henderson of Oelwein has received his discharge from the Medical Corps of the Army Air Forces after fifty-eight months of active duty, the last five of which were spent in Guam, Saipan, Iwo Jima, and Japan. Dr. Henderson, a Colonel at the time of his release, is taking a refresher course at the University Hospitals in Iowa City before resuming his medical practice in Oelwein.

Dr. Ralph E. Hibbs of Oskaloosa has received his discharge from the Army Medical Corps and at present is taking postgraduate work in Cleveland, Ohio. Dr. Hibbs held the rank of Major at the time of his release.

Dr. Hyman M. Hurevitz has resumed his practice in Davenport in the Davenport Bank Building after having received his discharge from the Army Medical Corps. Dr. Hurevitz, a Lieutenant Colonel, entered military service in August 1942 and spent twenty-eight months overseas in North Africa and Italy. He was awarded the Bronze Star Medal for his study of diarrhea and dysentery among American troops in the Mediterranean Area from May 1, 1943 to May 8, 1945.

Dr. Marshall D. Huston has received his discharge from the Army Medical Corps and plans to resume his medical practice in Centerville sometime in April. Dr. Huston has been in military service for more than three years and held the rank of Captain at the time of his release.

Dr. Alexander A. Johnstone has resumed his practice in Keokuk after having received his discharge from the Army Medical Corps. He was on active duty for almost four years, part of which was spent in the Aleutian Islands. Dr. Johnstone held the rank of Colonel at the time of his release.

Dr. John F. Kanealy, who was located in Iowa City prior to entering military service, has received his discharge from the Army Medical Corps and has established an office in Cedar Rapids in association with Dr. Ernest G. Kieck in the Iowa Theatre Building. Dr. Kanealy spent more than two years in the Army and at the time of his release held the rank of Captain.

Dr. Gerald F. Keohen of Oskaloosa has received his discharge from the Army Medical Corps and has located in Dubuque where he is a member of the staff of the Medical Associates. Dr. Keohen, a Major, recently returned from service in the Pacific Theater.

Dr. William M. Krigsten has resumed his medical practice in the Badgerow Building in Sioux City following his release from active duty with the Army Medical Corps. Dr. Krigsten was in military service more than three years and at the time he received his discharge he held the rank of Colonel.

Dr. George S. Kuntz, who practiced in Sibley prior to the time he entered military service, has received his discharge from the Army Medical Corps and has located in California. Dr. Kuntz, a Captain, served in the European Theater.

Dr. Jacob N. Lande has returned to Sioux City and resumed his practice in the Frances Building after having received his discharge from the Army Medical Corps. Dr. Lande reported for active duty more than three years ago and served a greater portion of the time in the European Theater. He held the rank of Lieutenant Colonel.

Dr. Kenneth E. Lister, who practiced in Chariton before entering military service, received his discharge from the Army Medical Corps late in 1945 and began on January 1, 1946, a three year residency in surgery at the Minneapolis General Hospital. Dr. Lister reported for active duty in April 1941.

Dr. Robert C. Locher, who practiced in Cedar Rapids prior to the time he entered military service, has received his discharge from the Army Medical Corps and has located in Texas. Dr. Locher, a Major, was on duty at McCloskey General Hospital in Temple, Texas, just before being released from active duty.

Dr. Henning W. Mathiasen of Neola has received his release from active duty with the Army Medical Corps after more than three years of service. Dr. Mathiasen held the rank of Captain and was on duty at the Veterans Administration in Alexandria, Louisiana, just prior to the time he received his discharge. He is residing temporarily in Council Bluffs.

Dr. Thomas L. McKee of Keokuk has received his release from active military duty after more than three years of service in the Army Medical Corps. Dr. McKee, a Major at the time he received his discharge, plans to locate in Florida.

Dr. J. Stuart McQuiston has reopened his office in the Higley Building in Cedar Rapids following more than three years of active duty in the Army Medical Corps. Dr. McQuiston held the rank of Lieutenant Colonel at the time of his release.

Dr. Arnold J. Mullmann of Adel has been released from active duty in the Army Medical Corps and on April 1 begins a residency in obstetrics and gynecology at Presbyterian Hospital, Chicago. Dr. Mullmann, who recently returned from the Pacific Theater, held the rank of Captain at the time he received his discharge.

Dr. Edward S. Murray of Cedar Rapids has received his discharge from the Army Medical Corps and at present is taking postgraduate work at Johns Hopkins Medical School. Dr. Murray, a Lieutenant Colonel at the time of his release, served three and a half years in the Middle East and Yugoslavia.

Dr. Stephen F. Nagyfy has been released from active duty with the Medical Corps of the Navy and has resumed his duties at the University Hospitals in Iowa City. Dr. Nagyfy was in military service more than three years and held the rank of Lieutenant at the time he was placed on inactive status.

Dr. Louis J. Noun has returned to Des Moines to resume his dermatologic practice following his release from active duty with the Navy Medical Corps. Dr. Noun was in service more than three years and held the rank of Lieutenant Commander at the time he was placed on inactive status.

Dr. C. Robert Osborn of Dexter has been placed on inactive status in the Navy Medical Corps and has reopened his office in Dexter. Dr. Osborn was serving as a Lieutenant at the time he received his release from active duty.

Dr. Furman P. Ralston has resumed his practice in Knoxville following his release from active military duty. Dr. Ralston, a Captain in the Army Medical Corps, was in service more than three years.

Dr. William L. Randall has returned to Hampton after having been placed on inactive status in the Medical Corps of the Navy and has become a partner in the Hampton Clinic with Drs. Howard H. Johnston and Seth G. Walton. Dr. Randall was on active duty more than three years and held the rank of Lieutenant Commander when he was released.

Dr. James E. Reeder, Jr., has received his discharge from the Army Medical Corps and has returned to Sioux City where he is associated with his father in eye, ear, nose and throat work. Dr. Reeder held the rank of Major at the time he was released from active duty.

Dr. John H. Rieniets has been released from active duty in the Navy Medical Corps following more than three years of service and is reopening his office in the Merchants National Bank Building in Cedar Rapids. Dr. Rieniets held the rank of Commander.

Dr. Treadwell A. Robertson has resumed his practice in West Liberty after having received his



discharge from the Army Medical Corps. Dr. Robertson served as a Captain and just recently returned from the European Theater.

Dr. Robert T. Rosenfeld, who was located in Council Bluffs before entering military service, has received his discharge from the Army Medical Corps and at present is located in Chicago. Dr. Rosenfeld held the rank of Major at the time of his release.

Dr. John W. Schwartz has reopened his office in the Badgerow Building in Sioux City following his release from military service. Dr. Schwartz, a Lieutenant Colonel in the Army Medical Corps, returned recently from foreign service.

Dr. Charles L. Seaman, who practiced in Mt. Ayr before reporting for active duty in the Army Medical Corps, has now received his discharge and has established an office in Cherokee for the general practice of medicine. Dr. Seaman was in military service more than three years and at the time of his release held the rank of Major.

Dr. David F. Shaw has returned to Britt to resume his medical practice after more than three years of active military duty. Dr. Shaw, a Major in the Army Medical Corps, just recently returned from service in the Pacific Theater.

Dr. Charles D. Shope, who practiced in Storm Lake prior to the time he entered the Army, has received his discharge and leased the office of Dr. Dale D. Cornell in Greenfield. Dr. Shope, a Captain, spent four years in the Army Medical Corps. Dr. Cornell is now at the University Hospitals in Iowa City where he has a psychiatric residency.

Dr. Carl W. Smith of Dubuque has been placed on inactive status in the Medical Corps of the Navy after three and a half years of service. Dr. Smith, a Lieutenant at the time of his release, plans to resume his medical practice in the near future.

Dr. Robert A. Smith has received his charge from the Army Medical Corps and has resumed his medical practice at Albia. Dr. Smith was on active duty for more than three years and at the time of his release held the rank of Captain.

Dr. Harold E. Stadler of Iowa City has received his discharge from the Army Medical Corps after more than four years of active duty and plans to resume his association with the University Hospitals. Dr. Stadler held the rank of Captain at the time of his release.

Dr. A. Bryce Stearns of Des Moines has received his discharge from the Army Medical Corps after almost five years of service, and at present has a residency at Henry Ford Hospital in Detroit. Dr. Stearns held the rank of Major at the time of his release.

Dr. John S. Tracy has resumed his practice in Sioux City, with offices in the Badgerow Building, following his release from active military duty. Dr. Tracy held the rank of Major in the Army Medical Corps at the time he received his discharge.

Dr. E. Martin Van Patten has returned to Fort Dodge and reopened his office in the Physicians Building after more than three years of military service. Dr. Van Patten held the rank of Captain in the Army Medical Corps.

Dr. Max T. Wainright, who practiced in Mapleton prior to the time he reported for active duty with the Army Medical Corps, has now received his discharge. Dr. Wainright, a Captain, was in military service three years.

Dr. Rudolph J. Wieseler, who was located in Avoca before entering military service, has received his discharge from the Army and has established an office in Shelby for the general practice of medicine. Dr. Wieseler served four years as a Flight Surgeon in the Army Air Forces.

Dr. Russell M. Wolfe has been released from active duty with the Navy Medical Corps and has resumed the practice of eye treatment and surgery in Marshalltown in association with Drs. Royal F. French and Ralph C. Carpenter in the Masonic Temple Building. Dr. Wolfe entered military service in June 1942, and at the time of his release held the rank of Lieutenant Commander.

Dr. Harold Wolfson has resumed his practice in Kingsley following his discharge from the Army Medical Corps. Dr. Wolfson, a Lieutenant Colonel, recently returned from the Pacific Theater of Operations.

The following physicians, who were previously reported released from active military duty, have announced the establishment of their offices in new locations:

Dr. William O. Griffith, formerly of Shelby, has joined the staff of the Cogley Clinic in Council Bluffs.

Dr. Henry H. Gurau of Des Moines has announced the establishment of his office at 213 Bankers Trust Building where he is associated with Dr. George A. May. Dr. Gurau limits his practice to diseases of the eye, ear, nose and throat.

Dr. Charles N. Hoyt, who was located in Cedar Falls before entering military service, has now established an office in Port Huron, Michigan, for the general practice of medicine.

Dr. Vernon W. Petersen has announced the opening of his office in Clinton in the Wilson Building on April 1. He will limit his practice to surgery. Before joining the Army Medical Corps Dr. Petersen

was on the surgical staff at the University Hospitals in Iowa City.

**Dr. Joseph C. Powers** of Hampton has announced his retirement from the active practice of medicine after nearly fifty years of continuous service in that community.

**Dr. Jay H. Wallahan** of Corning has retired from the active practice of medicine after forty-nine years of service, most of which have been spent in Adams County. His practice has been taken over by **Dr. John C. Nolan**, who has just recently received his discharge from the Army Medical Corps. Dr. Nolan was graduated in 1943 from the State University of Iowa College of Medicine.

**Dr. Emmet V. Ayers**, just recently released from the armed forces, has become associated in the practice of surgery with **Dr. Ray A. Fox** of Charles City. Dr. Ayers was graduated in 1941 from the State University of Iowa College of Medicine.

**Dr. Sidney F. Yugend** has located in Indianola where he has entered into a partnership with **Dr. Lester E. Hooper**. He just recently received his discharge after serving forty-six months as a Captain in the Army Medical Corps. Dr. Yugend was graduated in 1938 from the University of Minnesota Medical School.

**Dr. Richard H. Mordaunt** has become associated with **Dr. Bush Houston** of Nevada in the practice of medicine and surgery. He was recently released from active duty in the Navy Medical Corps after four and a half years of service. Dr. Mordaunt was graduated in 1941 from Baylor University College of Medicine in Dallas.

**Dr. Robert W. Asthalter** has located in Muscatine where he is associated with **Dr. Parke M. Jessup** in the practice of medicine and surgery. He recently received his discharge after being on active duty since June 1942, and at the time of his release held the rank of Major in the Army Medical Corps. Dr. Asthalter was graduated in 1939 from the State University of Iowa College of Medicine.

**Dr. Edward A. Watson** has become associated with **Dr. Samuel P. Leinbach** in the Steele Memorial Hospital in Belmond, according to an announcement recently made by Dr. Leinbach. Dr. Watson was graduated in 1941 from Northwestern University Medical School.

**Dr. Edwin A. Reedholm**, recently released from the Army Medical Corps, has located in Grundy Center where he is associated with **Dr. Henry L. Mol** in the general practice of medicine. Dr. Reedholm was graduated in 1941 from the State University of Iowa College of Medicine.

**Dr. David F. Weaver** has entered into a partner-

ship with **Dr. Martin D. Ott** of Davenport, according to an announcement made recently by Dr. Ott. Their practice will be limited to pediatrics and their office will continue to be in the First National Bank Building. Dr. Weaver served as a Lieutenant Colonel in the Army Medical Corps and following his discharge took postgraduate work at Children's Memorial Hospital in Chicago. Dr. Weaver was graduated in 1935 from the University of Michigan Medical School.

**Dr. Raymond A. Berger** has located in Davenport where he is associated with **Dr. Otto R. Voss** in the practice of radiology. Dr. Berger was graduated in 1930 from the State University of Iowa College of Medicine and is a Diplomate of the American Board of Radiology.

#### DEATH NOTICES

**Anneberg, August Reas**, of Carroll, aged sixty-five, died March 3 following an illness of several months. He was graduated in 1904 from Drake University College of Medicine, and at the time of his death was a member of the Carroll County and Iowa State Medical Societies.

**Carpenter, Lewis Walter Frank**, of Reasnor, aged seventy-eight, died February 24 after an illness of two months. He was graduated in 1904 from Drake University College of Medicine, and at the time of his death was a member of the Jasper County and Iowa State Medical Societies.

**Clark, Oliver Thaddeus**, of Keokuk, aged sixty-three, died suddenly March 13 following a heart attack. He was graduated in 1909 from Drake University College of Medicine, and at the time of his death was a member of the Lee County and Iowa State Medical Societies.

**Munger, Elbert Ervin**, of Spencer, aged seventy-eight, died March 14 following an attack of virus pneumonia aggravated by a heart ailment. He was graduated in 1894 from the State University of Iowa College of Medicine, and at the time of his death was a member of the Clay County and Iowa State Medical Societies.

**Smith, Fred M.**, of Iowa City, aged fifty-seven, died suddenly February 23 of a heart attack. He was graduated in 1914 from Rush Medical College, and at the time of his death was a member of the Johnson County and Iowa State Medical Societies. A more complete obituary will be found in the History of Medicine section of this issue.

**Thielen, Michael H.**, of Grundy Center, aged seventy-nine, died February 24 of pneumonia after an illness of three weeks. He was graduated in 1898 from the State University of Iowa College of Medicine and at the time of his death was a member of the Grundy County and Iowa State Medical Societies.



# The JOURNAL

of the

## Iowa State Medical Society

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No. 5

### THE PRESIDENT'S ADDRESS

RANSOM D. BERNARD, M.D., Clarion

The House of Delegates of the Iowa State Medical Society at its 1945 session adopted a resolution requiring that each President and President-Elect address the House of Delegates concerning the affairs of the Society. I am happy to present this brief summary of the past year's activities of your Society.

Our greatest problem has been to maintain the usual high plane of efficiency in all activities of the Society in the face of our great number of absentee members, the heavy professional burden carried by men well over fifty years of age, and the renewed activity of the government along many convergent fronts to absorb the practice of medicine.

The loss of Dr. Oliver J. Fay as a member of the Board of Trustees, and for many years its chairman, is deeply regretted by all. His years of experience, sound advice, careful analysis of the many problems affecting the policies of the organization, and his wise administration of the funds of the Society were sincerely appreciated by all who were associated with him in the Society's activities.

The details of the various committee activities may be observed by a careful study of the handbook. However, it may be well to call to your attention certain outstanding developments during the past year. The streamlining of our state organization, authorized at the 1945 meeting of the House of Delegates, was not too difficult for we had foreseen this trend when the Committee on Medical Service and Public Relations was organized. We followed closely the organization of the Council on Medical Service and Public Relations of the American Medical Association in making each member responsible for certain activities and permitting him to appoint as many subcommittees, with the approval of the chairman, as were neces-

sary. Meetings of the Committee have been frequent and the Committee as a whole has discussed the problems presented by each member. When necessary, all facts pertaining to a certain problem, as well as the Committee's opinion, were presented to the Council for final action.

Much has been accomplished. The economic chairman has worked throughout the year with Doctor Channing Smith, Medical Consultant of the State Department of Social Welfare, and the new program for the medical care of the blind is to be presented to the Society at this meeting. This program deserves your wholehearted support because it decentralizes the actual control from the State Department to the county societies.

The liaison member for our state mental hospitals has kept in close touch with the legislative investigating committee, one member of which spent an afternoon with our committee. As you know, two reports have been made to the Governor: a minority report by Doctor Hamilton, and a majority report by the remaining members of the committee. We as members of the medical profession should be the deciding factor in the final decision concerning the medical and physical care of inmates of these hospitals. The Governor has promised that a copy of both the minority and majority reports will be available to every member of the Society late this fall.

Public relations is to be one of the outstanding activities of the American Medical Association during 1946, and our own local public relations program initiated during this past year should be greatly augmented. Your Committee on Medical Service and Public Relations, through its liaison members and subcommittees, has conferred with local labor groups and farm groups. It is surprising, after having conferred with the labor groups, to learn how many problems we have in common, and in most instances how willing they are to cooperate with our plans. Many of the details of these plans will be worked out in cooperation with the Committee on Industrial

Health. A subcommittee of three represented Iowa at the national conference on rural health, held in Chicago, March 30, at which time an attempt was made to outline a national rural health plan. Any public relations program with farm groups must of necessity be carried on by the county societies.

After many conferences between Iowa Tuberculosis Association officials, representatives of the State Department of Health, the Legislative Committee and Public Relations Committee of the State Society, legislation is now being formulated to be presented to the next session of the legislature. This legislation will aim to correct the faults in existing laws for the commitment and care of tuberculous patients. A majority of these groups believe that hospital care should be free, that something should be done to correct the abuses of our present property lien law, and yet some provision should be made for accepting remuneration from those who can afford to pay for hospital treatment.

The liaison member for veterans' organizations and a subcommittee have been doing much work on the new Veterans Administration plan for medical care and will be prepared to present an Iowa contract and fee schedule to the House for its consideration should this information be desired. They have studied at length the contracts now in effect between the Administration and New Jersey, Michigan, Kansas, and California, as well as the proposed contract with Minnesota. I suggest that every possible effort be made to expedite full consideration of the facts this subcommittee can submit. We in Iowa have an unusual opportunity to learn at first hand from General Hawley his plans for veterans' care. An early consummation of a contract is most desirable and should not be difficult.

The most recent activity of the Committee on Medical Service and Public Relations has been in connection with the reorganization of the American Cancer Society. This is an outgrowth of the old American Society for the Control of Cancer. The national organization has been thoroughly reorganized and this reorganization carried down to the county level.

The American Cancer Society appoints a state chairman for its Executive Committee, this appointment to be approved by the state medical society. A majority of members of the Executive Committee must necessarily be physicians. A group of prominent business men and women constitute the finance committee and insure the success of the fund raising campaign.

A member of the Cancer Committee will present the Field Army's program to the House of Delegates. The fact that cancer killed more Americans between Pearl Harbor and V-J Day than were killed or missing during the war should stimulate every physician to get behind this campaign to make it a success.

Much credit is due to members of the Cancer Committee for the new manual on cancer for lay persons which is just off the press. I wish to thank them for the excellent work they have done, and also for their loyalty in remaining on the committee to stimulate further the work of the Field Army.

The Iowa medical service plan is off to a good start under the direction of Doctor Martin Olsen. Demand for the service has been great. The reaction of the doctors throughout the state has been varied. I have been told that the schedule of fees is too low, that certain specialty groups feel they have been discriminated against, that there should be no limit on income, that it costs the subscriber too much, that the general practitioner is getting the worst end of the deal, that it's a surgeon's policy only, that the fee schedule should be a minimum schedule, and last, but not least, that each doctor should write his own ticket. These expressions represent individual, or at most small group, opinion. The majority of the men throughout the state realize this plan incorporates the best which has been offered by other successful state plans, and that it gives maximum protection to the subscriber at a cost he can afford to pay, based on sound insurance experience. Doctor Larimer, in his Councilor report, aptly summarizes the matter: "In general, understanding of the plan has increased support for it." Our plan rates very high among national plans. It warrants your support, and you should know that the men in charge of it are conversant with your criticisms and are anxious to improve it as fast as sound insurance experience will permit.

On the national level we have supported the National Physicians Committee. We have been active in the North Central Conference, recently participating in an attempt to formulate some plan for veterans' care which would be applicable to the member states of the Conference. The Society was represented at two conferences of the Committee on Medical Service and Public Relations and two meetings of the Committee of Presidents. In addition, when in Washington, I personally contacted every member of our congressional delegation.



There has been little change in the policy of the American Medical Association in handling legislative matters. At the annual session of the American Medical Association in Chicago in December, the House of Delegates adopted a resolution instructing "the Board of Trustees and the Council on Medical Service and Public Relations to proceed as promptly as possible with the development of a specific national health program, with emphasis on the nationwide organization of locally administered prepayment medical plans sponsored by medical societies." This has resulted in an organization known as Associated Medical Care Plans, Incorporated, which will establish coordination and reciprocity among all medical service plans, thus permitting transference of subscribers from one plan to another, and making available the benefits in any state in which a subscriber happens to be located. There has also been established a Division of Prepayment Medical Care Plans with a director and a staff to administer activities related to the promotion and development of medical care plans in all states.

The foregoing is the first step in the development of a national health program by the American Medical Association, and is in reality a restatement of the fourteen point program with which you are all familiar. However, this is not enough. Defeat of the Wagner and Pepper bills will not produce a better health program for the American people, nor stop attempts to socialize medicine. It is my firm conviction, and I believe a majority of you will concur, that American medicine must not only assume responsibility for killing harmful legislation, but must urge helpful legislation. In this national health program we have a constructive basis for writing legislation for introduction into Congress. This Society, through its association with the North Central Conference, instigated, fought for, and finally assisted in the establishment of a Council on Medical Service and Public Relations. I advocate a greatly expanded program of public relations by this Council, or a comparable body if there is objection to this particular Council, to include a comprehensive legislative organization capable of functioning in a manner similar to that which has been successful in Iowa. It is also my humble opinion that the members of this group should include men of wide legislative experience, for upon them will fall the duty of implementing and giving form to the legislation which we hope to draft from our collective thinking.

The Trustees have given material evidence of their firm belief that this Society should share in a greatly expanded public relations program by

appropriating one thousand dollars for a national or sectional radio program, and in their recommendation for an increase in state dues of five dollars per member. This additional income is to be used to implement our own public relations. In itself, this is not a large sum when compared to the amounts other states have allocated for a similar purpose.

A glance at the various reports of the Councilors indicates that county society activities have been at a low ebb this past year. The reasons for this are obvious: too much work for the older men and too few men who could spare time to travel to the county societies and present a program. There should be a marked increase in interest in local county meetings this next year. No county is without returned servicemen who can contribute much to the programs; care of veterans will without doubt be handled on a county basis; the new cancer program will require an organization in each county; Iowa Medical Service is rapidly being organized on a county level; and the augmented public relations activities presuppose county participation. To stimulate further interest in county or small area meetings, I have suggested that our Speakers Bureau cooperate with the State University Medical School in the introduction of a new type of clinical meeting which I am sure will be of great value to all members of the Society.

Our state JOURNAL, particularly the editorial pages, has been outstanding this past year, and I regret exceedingly that Doctor Lee Hill felt his many other duties necessitated relinquishing the editorship. Our new editor, Doctor Everett George, is doing an excellent job, and you will note the Publication Committee has added an editorial board. I wish also to congratulate this Committee on the excellent management of the JOURNAL.

The Society is in a sound financial condition. It is interesting to note that in 1941 when our membership was probably at a normal level the income from dues was \$6,849.00 more than last year. This was due, of course, to the fact that no dues have been collected from men in the service. Also, our worth in bonds is \$2,000.00 more than in 1941 in spite of the fact that \$5,000.00 in bonds were used as a loan to Iowa Medical Service. With the normal increase in income from dues this next year, the Society should be able to operate without a loss. However, it cannot augment its public relations program without the increase in dues as requested by the trustees.

Much of the success of this past year's administration has been due to the tireless efforts of

the personnel of our well organized and efficiently managed state office. Miss Mary McCord is an outstanding executive secretary. Few realize the extent of her many and varied talents. She not only has an intimate knowledge of the details of the office, the various committee activities, the placement bureau, the county society organizations, as well as the numerous interstate activities, but she has practically the entire responsibility for the thousand and one details of our state meetings. Mrs. Dorothy Dolk has been largely responsible for the mechanics of the JOURNAL. Miss Alma Jensen, besides presiding at the outer office, can pinch hit in practically every department. I extend to these young ladies my deep appreciation.

I have always enjoyed working in the State Society. Your Society is an outstanding and progressive one and I am proud to have been in part responsible for the Basic Science Law, the prenatal law, the premarital law and Iowa Medical Service. Thank you sincerely for your fine cooperation, loyal support, and for the privilege of serving as your president.

## A POLLEN REFUGE AT HOME

### A Case Report

MILFORD E. BARNES, M.D.,

ROLAND ROOKS, PH.D., Iowa City

The following case report describes how an individual who was highly sensitive to ragweed pollen was enabled to reside throughout the season in a high pollen area, at home, in comfort, without immunization, without medication of any kind, and at moderate expense.

The patient was a married white woman, twenty-four years of age, who because of the war service assignment of her husband had returned to the home of her parents about June 1. She was in an advanced stage of pregnancy and on July 19 gave birth to her first child, a son. This event occurred about three weeks before the onset of the ragweed pollen season.

She was so highly sensitive to ragweed pollen that since the age of seven years it had been necessary to send her to a low pollen area each season because of the severity of her symptoms. These included both hay fever and asthma. Previous attempts at immunization had met with only partial success in her case. The parents were unable to make arrangements to send her to a low pollen area either before or after the birth of her baby. Therefore, it was necessary to devise some means

whereby she could be protected against exposure. It was deemed important, too, that her baby be protected because both his mother and his grandfather were allergic to ragweed pollen. There was a good chance, therefore, that the baby might be a fit subject for such sensitization. The lateness of her return to this area ruled out the possibility of building up a preseasonal immunity. Anyway, it was deemed inadvisable to start such treatments during the late months of pregnancy. That she had extremely low tolerance to pollen in 1945 is made evident in this report.

The only known familial case of ragweed sensitivity was that of the patient's father (sixty-one years of age) who developed reactions at about fifteen years of age. Thereafter, whenever residing in a high pollen area he suffered from severe symptoms of hay fever (no asthma). Prior to the war, because of the two allergic individuals, the family removed each season to a low pollen area. During the war, the father experimented with oral ingestion of pollen. Incidentally, through this means he gained so much relief that he was able to stay at his work throughout each of the war summers, although such seasons were never completely free from symptoms. He started oral treatments rather late, but by the time the 1945 season opened he was taking the so-called "maintenance" doses of pollen. Because he definitely had raised his resistance level, his case is of only secondary interest in this report.

The area (Iowa City) was one of relatively high pollen concentration. For four weeks the daily ragweed pollen counts exceeded 100 granules per 1.8 square centimeters of slides exposed twenty-four hours. Over a period of ten days the pollen counts exceeded 300. The peak count reached was 1,249 on September 1.

The methods of protecting individuals against exposure in a high pollen area fall into two groups; namely,

(a) Measures designed to protect the individual while outside the place of refuge. This involves the wearing of some sort of a mask. For a few cents one can purchase at any drug store a reinforced gauze mask of the Curity brand which we have found under both experimental and practical conditions to be highly efficient as a pollen filter.

(b) Measures designed to provide and maintain a low pollen or even pollen free place of refuge where the exposure to pollen will be on a controlled level.

The following procedures were carried out with striking success in this situation.

1. The control program was undertaken as a family project. In this instance it was adopted



because they wished to protect both the daughter and her baby. Incidentally, the patient's father stood to gain advantages also from such a refuge but he was depending upon his oral pollen to help him out. However, a family project is essential to success, otherwise other members will carry pollen into the area on their clothes or will be careless about doors and windows. The whole family must be "pollen-conscious."

2. The entire house was selected as the low pollen refuge. A single room might have been chosen under other circumstances, but it was felt that with the entire house included greater freedom would result for all concerned. The six room house was a two story frame building with three bedrooms upstairs. The volume of the house was approximately 13,000 cubic feet.

3. Accumulated pollen removed. Preliminary removal of pollen accumulated from previous years was attempted by suitable housecleaning before the onset of the ragweed season.

4. Storm windows installed. The prospect of storm windows in August may appear dismaying, but pollen is even more so to the allergic individual. As a matter of fact, the storm windows add to the insulation and therefore help reduce indoor temperatures, besides aiding materially in preventing pollen from sifting into the house. Storm windows were replaced on all windows except two, one of these being in each of two bedrooms upstairs.

5. Doors and windows kept closed. All doors and windows were kept closed at all times, except for the doors when the occupants had occasion to leave or to enter the house.

6. Window-type motor driven pollen filters installed. Window-type motor driven pollen filters were installed on the two bedroom windows mentioned, the intent being to ensure pollen free air during the sleeping hours. One of these filters was purchased from a commercial manufacturer and modified by installing an additional filter element, thus giving double filtration. The other was an experimental type made locally which at first was provided with one filtering element. Later an additional filter element was added to it. Our preliminary tests indicated a rating of at least 98.0 per cent efficiency as pollen filters for each of these installations when equipped with double filters. The volume of filtered air delivered by each machine when operating full speed was approximately 300 cubic feet per minute. One machine operating at full speed for forty-four minutes, or both operating for twenty-two minutes forced into the house a volume of filtered air in excess of the total cubic contents of the building.

Under this condition, the air in the house was both filtered and under a positive pressure. It was hoped that the latter condition, when existing, would help keep out pollen when the doors were opened as the occupants came and went. To avoid the heated outside air of midday, these machines were operated usually at intervals during the forenoon, late afternoon, and evening. In addition, because the night air was cooler and also had a much lower pollen content, at least one of the machines was operated for several hours and, on some occasions, all night. Fans were provided in various rooms to ensure air movement when needed. Through these means, aided by the fact that the building was fairly well insulated, the indoor temperature at noon was always several degrees lower than the outside temperature.

7. Bouquets forbidden. The flower garden was filled with beautiful flowers, but however harmless they might be, none were permitted to enter the house. The reason was that all outside flowers become covered with ragweed pollen.

8. Family pets barred. For the duration of the pollen season, the family dog was barred from the house, otherwise he would have brought in ragweed pollen accumulated while dashing about outside.

9. Steam laundry utilized. During the pollen season, all laundry was sent to the steam laundry instead of to a home laundry to avoid the pollen which accumulates on air-dried laundry. Fortunately, a diaper service was available which helped to solve the laundry problems involving the baby.

10. Protected room for airing. For airing garments and bedding, two windows on the sleeping porch were fitted with fibre-glass filters, all other windows being kept tightly closed. This arrangement permitted a limited cross ventilation with filtered air.

11. Family activities. The house was considered as a refuge, not an isolation unit, an important distinction psychologically. The members of the household were free to come and go, but the allergic members were instructed to wear Curity face masks while outside of the refuge, whenever their situation permitted them to do so.

12. Pollen counts. Properly prepared slides were exposed daily to measure the atmospheric pollen content. Once a week for four weeks slides were exposed in each bedroom, and in the downstairs living room. Indoor counts were discontinued after the pollen peak had passed.

#### RESULTS

*Comparative pollen counts.* Despite the fact that the atmospheric pollen count reached the highest peak level recorded in three years, the entire

house was maintained as a refuge practically free of pollen. The indoor counts were made only once a week. However, a deliberate attempt was made to include in such tests any accumulated pollen which might have settled during the preceding period. Thus, on the testing day after the slides were placed in position, the room was cleaned and dusted, beds were made and other activities carried on which should have stirred up any free pollen in the room. For this reason the indoor counts in the accompanying table represent the *worst* which could be secured in these rooms. The pollen actually suspended in the room air under ordinary conditions rarely if ever reached the maximum levels indicated.

COMPARATIVE RAGWEED POLLEN COUNT—1945  
(Granules per 1.8 square cm. per 24 hours)

Period Note 1	Outdoors High-Low for Period	Indoors		
		On Day of Indoor Count	Bedroom A Note 2, 4	Downstairs Bedroom B Living Room Note 3, 4
Aug. 14-16	119-4	50	2	0
Aug. 17-21	198-47	133	0	10
Aug. 22-27	558-97	558	0	14
Aug. 28-Sept. 4	1249-172	324	0	10
Sept. 5-11	338-65	Indoor counts discontinued because of passing of pollen peak.		
Sept. 12-17	39-14			

Note 1. The indoor counts were made on the last day of the period.

Note 2. Bedroom A had a commercial type window filter.

Note 3. Bedroom B had an experimental locally-made window filter.

Note 4. Following the placing of the pollen slides, all rooms were dusted to stir up any settled pollen.

*Clinical results.* The daughter remained practically free from symptoms throughout the entire season. She received no medication whatsoever. The only symptoms she had while in the refuge consisted of occasional sneezing. Such sneezing occurred only when there had been considerable agitation of the air within a room, such as bed-making or dusting, whereby such pollen as may have been carried into the house was stirred up. Her sensitivity is indicated by a post-season experiment, in which occasional sneezing resulted from exposure to an atmosphere with a pollen count of 7. At no time did she develop asthma from exposure to pollen within the house.

By the judicious use of face masks while outside the refuge, she was able to leave the house whenever she desired to do so. She went occasionally to the stores, had short visits with or calls from her friends, took frequent short auto rides with her family, and even attended a few bridge parties. On numerous occasions she discarded her face mask for short periods, but soon learned that this did not pay. The only attack of asthma followed too long an exposure, unmasked, at a bridge party. On her return to the refuge, all

hay fever symptoms disappeared usually within thirty minutes.

The baby at no time showed any evidence of sensitization, although his regimen included a daily trip outdoors.

The patient's father carried on his usual occupation and spent the most comfortable season in years, despite the unusually high pollen counts which prevailed. Undoubtedly he had developed a considerable degree of immunity from his pre-season treatments. However, this defense was much aided by the protection afforded him through sleeping in a low pollen refuge.

#### COST

The initial cost of two commercial type filters; the equivalent of which were used in this instance, is approximately \$150. No other equipment was required. This equipment, it should be noted, can be used each season thereafter, if desired. The only change needed would be the insertion of fresh filters.

#### SUMMARY

1. A highly sensitized individual was kept practically free of symptoms throughout the entire ragweed pollen season while residing in her own home in a high pollen area. Another partially immunized individual in the same home shared in the benefits.

2. The measures employed were the maintenance of a low pollen refuge in the home, and the use of reinforced gauze face masks while outside.

3. The refuge was kept practically free of pollen by forcing into it adequate volumes of filtered air.

4. The equipment used consisted of two window-type, motor driven pollen filters, each delivering a volume of approximately 300 cubic feet per minute. Each machine was equipped with double filter elements.

5. The cost of the installations was approximately \$150.

6. Despite outside pollen counts which rose to a peak level of 1,249, the maximum pollen count detected in the house at any time was 21. The maximum count in one of the bedrooms was 2 and in the other 14. Because deliberate efforts were made to stir up room dust during the exposure of these slides, the indoor pollen counts probably represent the maximum obtainable.

7. By providing protection during sleeping hours, and a safe retreat when tolerance doses are exceeded, a low pollen refuge is of obvious aid to individuals who seek relief through immunization.



THE USE OF PENICILLIN IN DISEASES  
OF THE EYE, EAR, NOSE AND  
THROAT

CECIL C. JONES, M.D., Des Moines

Penicillin represents a more advanced antibiotic agent which in some respects possesses many advantages over the sulfonamides.

A few cardinal concepts of our present knowledge of this drug are worth reiterating. Its inhibitory action particularly affects the staphylococcus aureus, hemolytic streptococcus, pneumococcus, gonococcus, and meningococcus. Penicillin inactivates organisms by inhibiting the metabolism of the intracellular enzymes of those organisms; therefore it is classified as an antibiotic. Conversely, some bacteria, such as the *Bacillus coli*, produce enzymes which inactivate penicillin. The desirable properties of the drug are also destroyed by acids, alkalies, antiseptics, and oxidizing agents; consequently, normal saline or water and certain buffer agents are the present vehicles of choice.

In aqueous solution it is said to lose 10 per cent of its potency every twenty-four hours when kept at 5 degrees Centigrade. Penicillin does not devitalize tissues or exert any deleterious effects upon blood cells or their production centers. Moreover, its antibiotic action is not retarded by the presence of body fluids, blood, pus, or exudates. It can be employed locally as well as systemically. It is not excreted in the tears, saliva or cerebrospinal fluid. The toxic effects are minimal and sensitization occurs much less frequently than with the sulfonamides which it has supplanted. At present the greatest handicap to the use of penicillin systemically is that hospitalization is required for its proper administration.

This discussion of penicillin relates only my personal experiences during the past two years and therefore does not mention many of the indications for its use. All patients receiving systemic administration were hospitalized, while those receiving the drug locally were ambulatory office patients.

In external eye infections penicillin is compatible with all of the common drugs used by the ophthalmologist, except adrenalin. In active suppurative dacryocystitis, twice daily irrigations of the sac with 1,000 units per cubic centimeter of penicillin has caused subsidence of the acute process without the necessity of incision and drainage. In one patient with erysipelas, secondary to a modified Moshen-Toti dacryocystorhinostomy

for a chronic dacryocystitis, the process resolved in thirty-six hours to 260,000 units penicillin intramuscularly. In the common acute catarrhal and acute infectious conjunctivitis, penicillin ointment, 1,000 units per gram, instilled every four hours during the waking period has been more effective than penicillin eye drops, sulfathiazole ointment, or other antiseptics employed. The ointment remains in contact longer and does not produce a local dermatitis as often as do penicillin drops.

My impression has been that acute infections respond more spectacularly than chronic infections. Dr. O'Brien of the State University has shown that the hemolytic staphylococcus aureus is in Iowa the most common cause of chronic conjunctivitis and blepharitis. Penicillin ointment, 1,000 units per gram, is more effective than 5 per cent sulfathiazole ointment when combined with meibomian massage and staphylococcus toxoid desensitization. Penicillin does not possess any antitoxic properties.

Several ulcers of the cornea which progressed under treatment consisting of atropinization, foreign protein, cauterization and heat, responded immediately to subconjunctival injections twice daily of  $\frac{1}{2}$  cubic centimeter of penicillin, 1,000 units per cubic centimeter strength. This is a painful procedure and requires adequate local anesthesia. Penicillin does not seem to inhibit corneal epithelization as do the sulfonamides when used locally. In the office I have used iontophoresis instead of subconjunctival injections because it is less painful and apparently is as efficacious. By this method a solution of 500 units per cubic centimeter is used for three minutes with a current of 2 milliamperes. Five traumatic perforations of the globe, one a wooden splinter in the anterior chamber, another a magnetic metallic foreign body in the iris, and three magnetic foreign bodies in the vitreous were managed with a minimal amount of reaction. Penicillin was used locally as an ointment and systematically, intramuscularly. In all of these cases treatment was instituted in less than three hours following the accident, which is very important. In another case in which a piece of lead penetrated the ciliary body the patient lost his eye under the same regime, except therapy was not instituted until twenty-four hours following the accident and no attempt was made to remove the foreign body.

In cases of iridocyclitis of undetermined etiology I have used penicillin systemically and locally, but have not thought the results any better than those obtained with fever or foreign protein therapy.

In the nose I use penicillin routinely in all

cases of acute or chronic ethmoiditis or sphenoiditis. First I thoroughly shrink the membranes by spraying with 0.5 per cent tuamine sulfate in normal saline. Then by the Proetz displacement technic I attempt to instill penicillin, using 1,000 units per cubic centimeter of normal saline. Acute eustachitis is managed in the same manner.

Subacute and chronic maxillary sinusitis uncomplicated by allergy frequently respond spectacularly to the following technic. The normal ostium is avoided so as not to traumatize its mucosa. Under local anesthesia a straight Dean antrum puncture needle is inserted as high as possible beneath the inferior turbinate filling the antrum to capacity with penicillin of 1,000 units per cubic centimeter strength. This is repeated twice daily for ten days. On succeeding punctures, the original hole can usually be found and a heavy, short, bevel B.D. needle suffices instead of the heavier antrum puncture needle. This procedure was copied from the general surgeon's method of managing empyema cavities with penicillin. Here again the surgeon is treating an acute infection, while suppurative sinusitis infections too often are chronic affairs. In my series of 32 cases of subacute and chronic maxillary sinusitis I have obtained clinical resolution in 68 per cent of the patients treated; that is there was cessation of discharge, the antral washings were clear, and there was a return to normal thickness of the antral mucosa as evidenced by x-ray examination following injection of iodized oil one month after discontinuance of treatment. Of the cases which required surgery it was found beneficial to start systemic penicillin therapy forty-eight hours preceding surgery and continue several days postoperatively, which definitely shortened convalescence.

In this series I excluded all cases in which eosinophils appeared in either the nasal smears or centrifuged sinus washings. One of my first impressions was that the more chronic the infection the less likelihood of resolution, but this concept did not hold true invariably.

My use of oral penicillin has been limited to infections of the mouth. Vincent's angina will respond rapidly to penicillin wafers, 1,000 units per wafer, dissolved in the mouth every one to two hours while awake. In the severe cases the powder can be worked between the gums and teeth. Cures can be effected in forty-eight hours. These wafers are also beneficial in acute pharyngitis, tonsillitis, and posttonsillectomy ulcers of the anterior pillars occurring during the convalescent period. Relief usually begins in eight to twelve hours and is complete in twenty-four to thirty-six hours.

In the ear 90 per cent of the organisms causing suppurative otitis media are penicillin sensitive. It so happens that in my experience all cases of acute suppurative otitis media have undergone resolution with sulfadiazine. It probably is a coincidence that I have not encountered sulfonamide sensitive or resistant individuals with acute suppurative otitis media necessitating the use of penicillin. Furunculosis of the external auditory canal responds well to wicks kept moist with penicillin using 1,000 units per cubic centimeter. However, in several instances a contact dermatitis developed demanding discontinuance of the drug.

Some patients who have chronically discharging ears have difficulty in that their ears will become dry when penicillin drops. 1,000 units per cubic centimeter, are instilled at three hour intervals. Cotton plugs coated with vaseline assist in keeping the solution in the middle ear. Prior to beginning treatment the ear should be thoroughly cleansed by irrigation, all granulations removed, and there must exist an adequate drum opening. In these cases, too, a dermatitis of the external auditory canal occurs every now and then. If either an active osteitis exists or cholesteatoma, this form of therapy is useless and is contraindicated.

Penicillin represents another advance in antibiotics, the use of which will become more refined and in all probability will be followed by other such agents.

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## IS THE INCIDENCE OF GASTRIC CANCER OVERRATED?

FREDERICK W. MULSOW, M.D., Cedar Rapids

Since there have been so few cases of cancer of the stomach observed in the Cedar Rapids hospitals over a period of years, it seemed worth while to make a rather extensive study of this subject. This study of the incidence of gastric cancer in Cedar Rapids was begun about ten years ago by examining all death certificates received at the City Hall. Special attention was paid to cancer of the stomach and gastro-intestinal tract, and the means by which the diagnosis was made. A previous report<sup>1</sup> of this study was published three years ago. The present report includes a further study of the incidence of cancer of the stomach at the Tumor Clinic of the State University of Iowa and at the Presbyterian Hospital of Chicago.

In the 1944 edition of Osler<sup>2</sup> the following statement is made regarding the incidence of cancer of the stomach: "In an analysis of 30,000



cases of cancer, W. H. Welch found the stomach involved in 21.4 per cent, this organ standing next to the uterus in order of frequency." These figures were obtained by W. H. Welch in 1882 in a study of over 30,000 postmortem examinations of cancer patients. I have not been able to find any similar figures, and in a personal communication from Dr. Henry Christian he said he did not know of any figures that were more reliable regarding the incidence of cancer of the stomach.

Walters, Gray, and Priestley<sup>3</sup> have stated: "There is an often quoted statement to the effect that approximately 38,000 persons die annually in the U. S. from cancer of the stomach." They also said that the incidence of gastric cancer is increasing. Many other references indicating an even higher incidence of cancer of the stomach are given in the previous report.<sup>1</sup>

During the past eleven years the death certificates reported to the City Hall in Cedar Rapids have been examined. Cancer of the stomach and other malignancies of the abdomen have been studied very carefully and in many instances the attending physician has been consulted in regard to the means by which the diagnosis was made. It was found that in about one third of the cases of cancer of the stomach the diagnosis was made on clinical findings alone; that is, there were no x-ray studies made, no biopsy or surgery done, and no necropsy made. Nevertheless, by including all of these doubtful cases there were only 125 cases of cancer of the stomach reported among 1,091 deaths from cancer and other malignant conditions. The frequency of cancer of the stomach and other more common forms are shown in Table I.

TABLE I  
Incidence of Some Common Forms of Cancer Among Total Cases Studied

Origin of Growth	City Hall Cedar Rapids	Tumor Clinic University of Iowa	Presbyterian Hospital Chicago
Total Cases	1,091	6,136	1,916
Breast	131	558	201
Colon	179	307	185
Cervix and Uterus	127	657	210
Stomach	125	358	129
Lung	49	134	29
Prostate	57	579	263
Rectum	43	293	246

At the Tumor Clinic of the State University of Iowa, during the period July 1, 1939 to June 30, 1945, there were 358 cases diagnosed as cancer of the stomach among 6,136 cases of cancer and other malignant tumors seen at the Clinic. This gives an incidence of 5.8 per cent. From Table I it will be seen that during this period there were more cases of cancer of the breast, uterus, and prostate. The Clinic also had 500 cases of cancer of the skin, which are not shown in the

table. The high incidence of cancer of the skin and prostate tends to decrease relatively the incidence of cancer of the stomach, but cancer of the uterus and breast are also more frequent than cancer of the stomach.

The card files of the Presbyterian Hospital of Chicago were examined recently in regard to the incidence of cancer of the stomach and other common forms of cancer. This study covered the five year period from January 1, 1940 to December 31, 1944. In this hospital, as shown in Table I, cancer of the stomach was diagnosed less often than cancer of the breast, colon, prostate, rectum, or uterus. The increased frequency of cancer of the prostate and rectum tends to reduce the percentage of gastric cancer, but there were also more cases of cancer involving the breast, colon, and uterus. Cancer of the stomach was found in 6.7 per cent of all cancers.

Schrek and Allaben,<sup>4</sup> in an analysis of 1,462 primary admissions of cancer patients to the Hines Hospital during 1943, found cancer of the stomach in 81 or 5.5 per cent of the cancer patients admitted. During this same period their admissions included 180 cases of cancer of the skin, 145 of the lung, 108 of prostate and bladder, 84 of the mouth and tongue, and 76 of the colon.

SUMMARY AND CONCLUSIONS

Cancer of the stomach is a common and serious form of cancer. Cancer of the stomach was seen in 5.8 per cent of 6,136 cancer patients studied at the University of Iowa, in 6.7 per cent of 1,916 patients with cancer seen at the Presbyterian Hospital of Chicago, and in 5.5 per cent of 1,462 patients with cancer admitted to the Hines Hospital of Illinois. From the death certificate reports at the City Hall in Cedar Rapids, there were 125 deaths attributed to cancer of the stomach among 1,091 cancer death reports. It would seem that the accuracy of the diagnosis of cancer of the stomach should be much better in the hospitals mentioned than can be obtained from death certificates.

From the present study it seems that cancer of the stomach is obviously not the most common form of cancer and lacks proof of being the cause of 20 to 30 per cent of all cancer deaths as is found in most textbooks concerning the incidence of cancer of the stomach.

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College of Medicine  
CLINICOPATHOLOGIC CONFERENCE  
March 4, 1946

ABSTRACT OF CLINICAL HISTORY

The patient, L. H., a negro male thirty-four years of age, was admitted to the Department of Urology on December 6, 1945, transferred to the Department of Surgery on December 7, 1945, and died on December 26, 1945, while on the Surgery Service.

The patient was acutely ill on admission to the hospital and could not give an accurate history regarding the sequence of events during his illness. About six months previously he had had an attack of severe knife-like pain in the abdomen which doubled him up. The pain was located to the right and slightly above the umbilicus. The pain was transient and occurred intermittently for two days, following which it subsided and the patient returned to work. About two months before admission he began to have recurrent attacks of right upper quadrant pain similar to the first episode. These attacks of pain had continued off and on but were not severe enough to distress him seriously until about five weeks before admission (about November 1, 1945). At that time the pain became constant. It was severe, dull, and aching, always present in the right upper quadrant and seemed to go through to the back. There was some radiation around the right costal margin to the right costovertebral angle with associated tenderness in the latter area. There was occasionally some nausea associated with the pain, but there had been no vomiting. Five weeks before admission he entered a local hospital where a diagnosis of undulant fever was made and he was given penicillin for three weeks. The patient was discharged from the local hospital a week before admission here. There had been no associated urinary complaints other than at the time of urination there was pain which seemed to start at the right groin and travel up to the right costovertebral angle. He denied chills and fever. There had been a weight loss of sixty to eighty pounds in the past few months. There was no history of food idiosyncrasy or jaundice. His bowel movements had been regular with occasional episodes of constipation. There was no history of diarrhea or tarry stools.

The following abstract of the patient's history was obtained from the physician's report on the commitment papers which were received on De-

cember 14, 1945: "Ill for four to five weeks, began with chills, fever, and then after about three weeks pain in side began. On admission to hospital white count 11,000, after three days it went to 22,000, then 24,000, 20,000 and 26,000 on dismissal despite penicillin and sulfathiazole."

About a year before admission the patient had been hospitalized for what he said was Malta fever; since then he had had several episodes of fever. He denied typhoid fever and other serious illnesses. A shoulder was dislocated at the age of seven years. At the age of fourteen a pop bottle burst and injured his left eye, after which he lost vision in that eye. He had had carious teeth and had started nine months before to have them extracted. A year prior to admission he had been treated for pleurisy for three weeks by his local physician but he had continued to work during that time. He had had treatment for syphilis about fourteen years before his present illness, having received one injection a week for one and one-half years. He had contracted gonorrhea three years prior to admission and had received sporadic treatment for it since that time.

The patient was not married. He had resided in Mississippi prior to the last two and one-half years. He had been employed as a "sheep sticker" in a packing house.

The physical examination revealed a malnourished negro male who appeared acutely ill. During the examination he was retching and coughed up a slightly green, thin sputum. The oral temperature was 100 degrees, the pulse rate 110 per minute, and the respirations 20 per minute. The significant observations in the examination were as follows: The left cornea showed extreme scarring with loss of vision in that eye, the right pupil reacted well to light and accommodation. The mouth showed seven carious teeth remaining. The chest was thin-walled; percussion revealed slight dullness at the right lung base and no movement of the right diaphragm. The heart showed no evidence of enlargement, the sounds were normal and there were no murmurs. No blood pressure measurements were recorded by any of the five examiners (it was recorded as 120/80 in the anesthesiologist's record). The abdomen was scaphoid except for a prominence visible in the right upper quadrant. Palpation of the abdomen revealed rather marked tenderness and rigidity in the right upper quadrant and the presence of an ill-defined mass in this region. The mass extended from the right costal margin to the level of the umbilicus, and from the midline into the right flank. It seemed very firm and did not descend with inspiration. No costovertebral angle tenderness was



On December 7 a Miller-Abbott tube was passed into the patient's stomach and continuous gastric suction started. This was maintained for the next eleven days, his fluid intake was maintained by parenteral administration. He continued to have pain almost constantly in the right upper quadrant and this gradually increased in severity. His temperature rose to 102 degrees on December 8 and then gradually subsided to 98 degrees on December 14. With the increase in the pain there was increased tenderness and rigidity in the right upper

On December 18 there was profuse, foul drainage from the abscess cavity. It apparently contained fecal material and bile. The rubber drains were removed and catheter suction was established in the wound. Microscopic examination of the material revealed organisms resembling *Bacillus*

Blood Chemical Findings				Plasma Proteins (gm. per 100 cc.)		Total
	Urea Nitrogen	Creatinine	Albumin	Fibrinogen	Globulin	
12-6	13.3	1.0				
12-8			1.98	.44	4.08	6.5
12-15			1.85	.55	4.40	6.8
12-19			1.83	.53	3.64	6.0
Blood transfusions were given 12-11, 12-16, and 12-22.						

coli and cocci. Gastric suction was discontinued on December 19 and a liquid diet was started. Fluids taken by mouth accentuated the drainage from the abscess cavity. Carmine dye, given by mouth, was noted in the drainage from the suction tube two hours and ten minutes later.

The patient complained of very little pain following the drainage of the abscess. However, he became gradually weaker from day to day, his temperature varied from 96.6 to 99.6 degrees, and he died on December 26, 1945.

#### CLINICAL DISCUSSION

*Dr. R. N. Bartels:* This man presented problems of unusual interest in differential diagnosis and treatment. We know that two definite features were present in his disease. The x-ray appearance of the coloduodenal fistula has been demonstrated, and you have noted on your protocol that an intra-abdominal abscess in the right upper quadrant was drained. I should like to consider the differential diagnosis from two aspects: first, assuming the disease was primary in the colon and, second, assuming the primary lesion was outside the colon and involved it secondarily.

The causes of acquired internal colonic fistulae are not numerous. They may be classified as post-operative, traumatic, or pathologic. I believe we can dismiss the first two without further consideration. In the pathologic group the cause is usually malignancy, actinomycosis, tuberculosis, ulcerative colitis, or diverticulitis. An internal colonic fistula in itself may give few symptoms, but when associated with intraperitoneal infection there is fever, pain, weight loss, and anemia.

**Malignancy:** A carcinoma of the right half of the colon is frequently a large, flat, bulky ulcerated lesion, usually situated on the lateral wall. The colloid type particularly is likely to give perforation and abscess formation. Perforation or extension of the growth is more likely at some flexure or fixed point. In the hepatic flexure close proximity to the duodenum or biliary tract makes for easy attachment to these organs. Symptoms of carcinoma of the right half of the colon are variable. Pain and tenderness, anemia and weight loss are the ones usually noted. On physical examination a mass may or may not be palpable. Diarrhea, denied by this patient, is more common than constipation. There is little tendency to obstruction. The liquid nature of the feces, the large lumen of the bowel and the infrequent tendency to encircle the lumen seem to be the reasons why obstruction is not often present unless the ileocecal valve is involved. This man was hardly in the so-called "cancer age," but we know that when carcinoma of the colon occurs in an individ-

ual under thirty-five years of age it is likely to grow rapidly and perforate early.

**Actinomycosis:** The cecum is most commonly affected in actinomycosis of the gastro-intestinal tract. The symptoms may be those of acute appendicitis when the appendix is involved primarily. In chronic actinomycosis involving the cecum or right half of the colon, pain and tenderness may or may not be a prominent feature. The disease is usually characterized by a slowly growing, ill-defined mass which becomes fixed to the abdominal wall. Gradually it softens and forms persistent sinus tracts which drain to the outside. It is difficult to make the diagnosis until the external sinus tracts appear, then it can be confirmed by microscopic study of the discharge or tissue. Invasion of adjacent viscera with the formation of an internal fistula may occur before or after the external fecal fistula is established.

**Tuberculosis:** Tuberculosis affects the proximal colon more often than the distal colon. Pain of variable intensity is the most common symptom. There is usually a history of weight loss. There may be no history of change in bowel habit, but, if there has been a change, diarrhea is more commonly noted than constipation. Physical examination may reveal a palpable mass in the abdomen. Perforation and abscess formation with or without the development of an internal colonic fistula may occur. Differentiating tuberculosis from carcinoma of the colon is difficult with the aid of x-ray examination after barium enema and may even be difficult at operation.

**Ulcerative colitis:** Abdominal cramps and diarrhea with the passage of blood, pus and mucus, the common symptoms of idiopathic ulcerative colitis, were not present in this man. The disease usually starts in the distal colon and extends proximally. Segmental involvement may occur. The x-ray appearance of the smooth, narrow foreshortened colon is usually diagnostic. Perforation of the colon with the formation of an abscess and internal fistula may occur as a complication in either the acute or chronic stage.

**Diverticulitis:** Diverticula are rare in the cecum and ascending colon, therefore diverticulitis is rare in this area. Since the colon series shows no diverticula, one might postulate the perforation of a solitary diverticulum. This would be very unusual. The symptoms of diverticulitis in the right colon resemble appendicitis. The diverticulitis may go on to perforation and abscess formation. This abscess may perforate secondarily into bowel and occasionally a spontaneous cure will result.

Now let us consider the other theory, that the



disease originated outside the colon and involved it secondarily. The symptoms and physical findings of a subphrenic or subhepatic abscess are pain in the right upper quadrant of the abdomen referred to the lumbar area or costal margin, diminished costal movement, elevation of the diaphragm, and an increased area of hepatic dullness. The symptoms and findings of such an abscess were present in this man, and an abscess, presumably subhepatic, was drained operatively. We also know that such an abscess may rupture into adjacent viscera, but rupture into two organs is very rare.

The most common causes of subphrenic or subhepatic abscess are appendicitis, perforated peptic ulcer, and cholecystitis.

**Appendicitis:** Whenever there is a perforation of an appendix, particularly when it lies retroceally, the infection may ascend the lateral gutter and localize in the right subhepatic or subphrenic space. This man's symptoms, particularly the recurrent attacks of abdominal pain finally becoming constant, and the associated physical findings are compatible with a diagnosis of subhepatic abscess due to recurrent acute appendicitis with perforation.

**Perforated duodenal ulcer:** A subacute perforation of a duodenal ulcer with a walled off localized infection should be considered. The symptoms at the onset are less severe than those associated with acute perforation and generalized peritonitis. We know that perforation of an ulcer may occur without a long history of the usual ulcer symptoms. However, the further development of a duodenovisceral fistula after perforation is extremely rare. Four cases of benign duodenocolic fistula (all due to perforated duodenal ulcer) were reported in the literature<sup>1</sup> between 1885 and 1940. Another was reported by McClinton in 1944.<sup>2</sup> All were diagnosed by barium enema, none by gastric series. Such a duodenocolic communication causes rapid loss of weight and strength. Diarrhea occurs and the stools contain large amounts of bile. There may be fecal-smelling vomitus. Of these symptoms only loss of weight and strength were present in this man.

**Cholecystitis:** In acute cholecystitis the gallbladder usually becomes adherent to the surrounding viscera, particularly the duodenum and hepatic flexure of the colon. A gallstone ulcerating through the wall of the gallbladder and adjacent duodenum is the most frequent cause of cholecystoduodenal fistula. A cholecystocolic fistula may occur in

the same manner but is less common. Fistulae between the gallbladder and two separate organs at the same time are extremely rare. In some instances a pericholecystic abscess, essentially a subhepatic abscess, is formed which may rupture secondarily into the duodenum or colon. The formation of such a fistula between the gallbladder and an adjacent organ usually relieves the patient's symptoms, although occasional episodes of cholangitis may occur. In this man improvement apparently did not follow the development of the fistula.

Our presumptive diagnosis, before operation, of the basic lesion and cause of the coloduodenal fistula was carcinoma of the colon. The second and third considerations respectively, neither receiving strong support, were perforated duodenal ulcer and appendicitis. If our diagnosis of carcinoma of the colon were correct, it was quite evident that one could not hope to cure him by radical surgery. A sidetracking ileocolostomy was considered for palliation. However, he developed a striking increase in pain, tenderness, rigidity and leukocytosis, and we thought it best to drain the abscess. We hoped that by operation his condition could be improved enough to allow definitive treatment later and perhaps help us to gain additional information. Our postoperative diagnosis was right subhepatic abscess; coloduodenal fistula, cause undetermined, probable malignancy of the colon.

**Clinical Diagnosis:** Subhepatic abscess; coloduodenal fistula (cause undetermined—probable carcinoma of colon).

#### SUMMARY OF NECROPSY FINDINGS

This was a case of amebiasis, with primary involvement mainly of the appendix. Multiple amebic abscesses of the liver were present. One of these had ruptured, giving rise to a large subhepatic abscess. There were two connections of this subhepatic abscess with the intestine, one with the second part of the duodenum and one with the hepatic flexure of the colon.

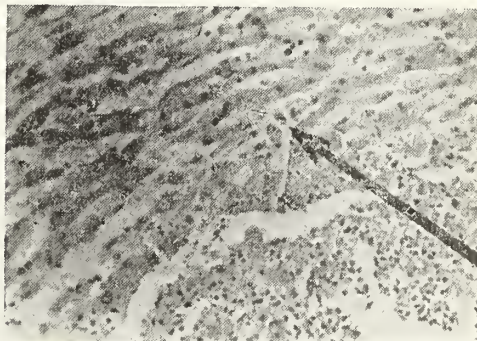


Fig. 1. Wall of liver abscess. Arrow points to three amebae.

1. McPeak, C. N.: Benign duodeno-colic fistula with report of 2 cases. *Radiology*, xxxiv:343-350 (March) 1940.

2. McClinton, J. B.: Non-malignant duodeno-colic fistula. *Can. M.A.J.*, li:434-436 (November) 1944.

*Vermiform appendix:* It was greatly swollen (9 cm. in length, 2 cm. in diameter) and deep red in color, but lay free in the abdominal cavity. Its surface was covered with a thin layer of fibrin, as were the adjacent cecum and colon. A few delicate fibrous adhesions in this area were easily broken. Cross sections of the appendix showed the wall to be thickened and the surface ulcerated.

Histologically, remnants of appendiceal mucosa were found. The ulceration varied in depth, in places extending only to the muscularis mucosa, elsewhere to the inner muscular layer. The base of the ulceration showed marked fibrosis but only a moderate inflammatory response, with lymphocytes and large mononuclear leukocytes the predominant cell types. Numerous isolated *Entamoeba histolytica* trophozoites were scattered throughout, just beneath the ulcer base. The trophozoites were situated in tiny tissue spaces, with essentially no tissue reaction about them. They had the typical small nucleus, with peripheral condensation of the chromatin and a small central karyosome. Ingested erythrocytes were seen in several trophozoites.

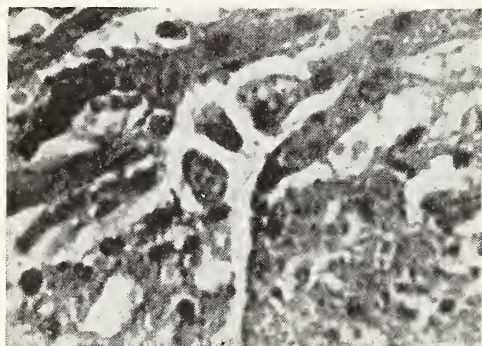


Fig. 2. High power view of Fig. 1, showing digestion of liver cords by colony of amebae.

*Liver:* In situ, the inferior portion of the right lobe formed part of the wall of the large subhepatic abscess. This part of the liver showed destruction of the capsule, with the exposed parenchyma being ragged, friable, soft and of a yellowish gray color. Elsewhere, the capsule was intact. However, on the superior surface of the right lobe several bulging subcapsular abscesses were seen. There were no adhesions to the diaphragm. On section, multiple abscesses, mainly in the right lobe, were exposed. They were irregular in outline, had a thick grayish yellow content, and measured up to about 4 centimeters in their greatest dimension. Between these abscesses the lobular markings were preserved. The organ weighed 2,000 grams.

The abscess walls were composed of nearly intact but compressed cords of liver cells. Bluish staining necrotic cellular debris filled the abscesses. In the wall, numerous trophozoites, often in colonies of two or three individuals, were seen. The

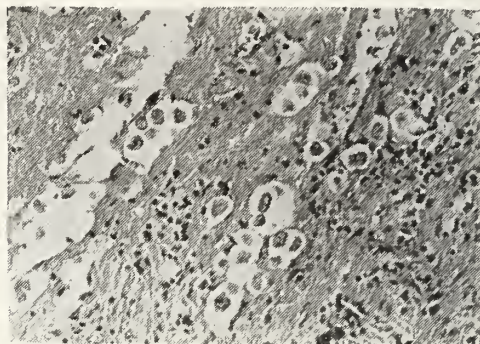


Fig. 3. Wall of subhepatic abscess. Many amebae seen.

remaining liver tissue showed central congestion. The bacteriologic report of a culture of one of the liver abscesses was "*Escherichia coli* — large amount. *Pseudomonas aeruginosa*."

*Subhepatic abscess:* This abscess extended from the inferior surface of the right lobe of the liver into the right lateral pericolic gutter to a level approximately opposite the ileocecal junction. The right midrectus surgical incision overlying the abscess had not healed, and before dissection, the foul smelling, thick, dirty, yellowish purulent contents of the abscess were seen through this defect in the abdominal wall. The abscess was well walled off, and there was no evidence of a generalized peritonitis. Forming part of the medial wall of the abscess were the second portion of the duodenum and the hepatic flexure of the colon which had been displaced medially. Each of these structures had been perforated, and upon pressing them, bubbles of air gurgled up through the abscess contents. Sections taken through the walls of these fistulous openings showed extensive tissue dissolution and myriads of trophozoites, mainly in the subserosal layers of the gut. There was no ulceration of the intestinal mucosa beyond the fistulous openings. Sections taken from the abdominal wall forming part of the lateral wall of the abscess showed only a nonspecific granulation tissue and considerable fibrosis.

Except for severe emaciation, there were no other significant anatomic findings. The brain was not examined.

*Necropsy Diagnosis:* Amebic appendicitis, severe; peritonitis, fibrinous, limited to periappendiceal region, mild; amebic abscesses, liver; amebic abscess, subhepatic, secondary to rupture of ame-



bic abscess of liver; fistula, duodenal, second portion, and colic, hepatic flexure, amebic, communicating with subhepatic abscess; emaciation, severe.

#### LABORATORY ASPECTS OF AMEBIASIS

*Dr. I. H. Borts:* This case report and autopsy findings bring out two things which I wish to emphasize: First, the desirability of considering the possibility of amebiasis in the differential diagnosis in all intestinal conditions and particularly where there is associated liver involvement; and second, the importance of obtaining a complete history relative to previous dysentery, diarrhea or mushy stools with alternate periods of constipation. Diarrhea and dysentery are present primarily where there is amebic involvement of the lower portion of the large bowel. When the pathology is limited to the ileocecal region, mushy stools or constipation are the rule.

When the stool is dysenteric, diarrheal or mushy, the laboratory diagnosis is based upon the finding of the active, motile trophozoites in the freshly passed warm stool. The trophozoites are delicate forms which disintegrate within a short time after leaving the body, hence the necessity of examining the stool immediately following passage under warm conditions. Unless this is done a great deal of time can be lost in attempting to make a diagnosis and negative examinations are not unusual. As the stool becomes formed, cysts predominate which are hardy and will stand transportation to a distant laboratory for carrier status determination.

Oily preparations, bismuth, and barium should not be administered within three days prior to stool examination since these products seriously interfere with the detection of ameba.

The diarrheal, dysenteric, or mushy stool should be collected in a warm bed pan, free from urine. A portion may be transferred to a warm paper carton, kept warm, and rushed to the laboratory. The stool should be examined within fifteen minutes of its passage. It is desirable that the hospital laboratorian be notified in advance so that a warm stage may be set up and someone be available to examine the specimen immediately. In the interim special culture media can be prepared for immediate cultivation of the stool specimen for ameba. Cultural procedures should be carried out in all instances where ameba are not found or when there is a question of species identification. The Locke-egg serum media of Boeck and Drbohlav or the Cleveland-Collier medium are satisfactory. Portions of mucus or bloody mucus are selected for microscopic examination. Under these

conditions the trophozoites will be actively motile and a diagnosis can be made readily. On the contrary, if the stool is not properly collected, is delayed or chilled enroute to the laboratory, a great deal of difficulty and time is lost in trying to reactivate the ameba so that the typical motion may be observed. I have seen stools that were properly submitted, which were teeming with ameba, although an examination of the same specimen made thirty minutes later gave negative results. Strains of ameba differ considerably in the time of disintegration after leaving the body.

*Endamoeba histolytica* trophozoites must be differentiated from the nonpathogenic ameba, particularly *Endamoeba coli*. Large macrophages which are sluggishly motile must also be differentiated from *E. histolytica* trophozoites. This motility of *E. histolytica* in freshly passed warm stools is definitely directional, the pseudopods (ectoplasm) are clear and explosively formed. The endoplasm of many contain red blood cells. The nucleus is not seen and bacteria and foreign debris are absent. This active directional motion and the inclusion of red blood cells are highly diagnostic of *E. histolytica*.

Mucus or bloody mucus may be obtained from the base of the ulcers on sigmoidoscopic examination and promptly examined under a warm stage for trophozoites.

As the stool becomes formed, trophozoites are rarely found. Cysts predominate in the stool during this stage. The formed stools should be examined promptly, if possible, since the detailed internal structures are better observed, and this is essential in cyst species identification. Examination may be carried out following centrifugation technics or preferably following zinc sulfate floatation. If a laboratory is not available, the formed stool may be submitted to a distant laboratory in 5 per cent formalin solution (1 part commercial formaldehyde to 19 parts of tap water). The ratio of stool to formalin solution should be 1:9 respectively. An unpreserved portion should also be submitted for concentration followed by a cultural procedure.

#### EPIDEMIOLOGY OF AMEBIASIS

*Dr. M. E. Barnes:* 1. *The infective agent:* The basic epidemiology revolves about the 4-nucleate cysts of *Endamoeba histolytica*. There is but one means of contracting the infection; namely, by ingesting the mature 4-nucleate cyst. There is but one means of transmitting the infection; namely, by the passage of 4-nucleate cysts in the stools of the infected patient.

The ingested cyst passes unharmed through the

stomach, but excysts in the small intestine. The 4-nucleate organism thus freed gives rise to eight trophozoites through nuclear and cytoplasmic division. Under favorable conditions these trophozoites divide thereafter by binary fission.

Invasion by the trophozoites requires contact with the body tissues. The first opportunity for such contact is in the ileocecal region where stasis of the intestinal contents may occur. Thus, primarily amebiasis starts as a disease of that region and may not involve any other part of the intestinal tract, or it may involve also the lower bowel, and by metastasis the liver, or other organs. Colonies of the trophozoites are responsible for the pathologic lesion. Some trophozoites in the intestinal tract develop into resistant forms known as cysts, and the cysts pass from the body in the feces.

2. *Modes of transmission:* A patient may discharge millions of cysts in the feces daily. Such cysts die quickly when exposed to drying, and they do not multiply outside the body. That these cysts may be transferred from feces to the mouth of individuals has been proved for each of the following routes, but no one route can be singled out as of predominant importance. By one route or another, surveys indicate that approximately 10 per cent of the adults in the northern states have become infected.

a) *Feces—hands—food—mouth:* Food handlers obviously have an opportunity to participate in this route of transfer, the reality of such hazard being emphasized by the finding of cysts on the hands or under the fingernails of 5 per cent of food handlers in certain surveys. Despite the theoretic probability, the actual role of food handlers is somewhat uncertain.

b) *Feces—water—mouth:* This route is possible particularly in rural areas where fecal contamination of shallow wells or springs may occur. The greatest recorded epidemic of amebiasis occurred during the second World's Fair at Chicago. Much evidence was accumulated involving the water supply of certain hotels in that outbreak. In the general distribution of cysts, however, it is somewhat doubtful that water plays an important role.

c) *Feces—vegetables—mouth:* In some Oriental lands, human excreta is used to fertilize vegetable gardens. Under such conditions no imagination is needed to explain the possibility of the ingestion of cysts.

d) *Feces—flies—food—mouth:* The finding of cysts upon the bodies of flies proves the possibility of such a method of transfer. We have little

evidence as to the importance of this route of transfer.

3. *Incubation period:* Experimental infection of human volunteers has been reported, the first trophozoites appearing in the stools in nine days on the average.

In the Chicago epidemic the symptoms developed as early as eight days after ingesting the cysts. Oftentimes, however, the incubation period is indefinite and seemingly prolonged, when judged by the appearance of symptoms. We have no means of knowing when this particular patient was first infected. His history records fairly acute abdominal symptoms six months prior to hospital admission and less defined symptoms one year before.

4. *Medical treatment:* In the use of amebicidal drugs several points of importance should be kept in mind.

a) To be effective, the drugs must reach the trophozoites. Although in an amebic abscess the superficially located trophozoites contribute materially to the damage, extension of the damage obviously is due to organisms which have penetrated more deeply into the surrounding tissues. In intestinal lesions, the tendency of amebae to cause bottle type ulcers with undermining or even submucous sinuses makes it difficult to reach them by drugs passing along the lumen of the intestines. Trophozoites colonizing the liver can be reached only by drugs circulating systemically.

b) All amebicidal drugs are toxic to man. The objective is to so balance the dosage as to poison the parasite without doing serious damage to the patient. Before administering such drugs, one should familiarize himself with their toxic manifestations, and with the safe dosages. It will not be possible to discuss these points here.

c) To reach trophozoites deeply imbedded in the tissues, such as in the intestinal walls or in amebic abscesses of the liver, the drug par excellence is emetine hydrochloride administered hypodermically in *daily doses* not to exceed 0.065 gram (1 grain) and for a period limited to seven or not to exceed ten days. For the acute stage and for liver abscesses it has no equal. In my judgment, it should be included in the treatment of every acute case to avert if possible metastatic colonies in the liver.

d) To reach the trophozoites in the intestinal lumen and in the accessible areas of amebic ulcers in the intestines, several useful drugs are available. These may be given simultaneously with emetine, and continued or repeated subsequently thereto. One of these orally administered drugs should always be included in the treatment of intestinal



amebiasis. Although each may have some systemic value, their amebicidal value is predominantly local. It depends basically upon the presence of pentavalent arsenic (as in carbarsone) or of iodine (as in chiniofon or diodoquin).

Although through medicinal treatment recovery has been reported in cases seemingly hopeless, the extensive hepatic and abdominal lesions in this case seem to preclude the probability that drug therapy would have been of any avail at the time he reached this hospital.

#### DISCUSSION

*Dr. DeGowin:* If the diagnosis had been made, what should the surgical treatment have been?

*Dr. Bartels:* Before discussing the surgical treatment proper, let us first consider some statistics taken from the excellent review of the subject by Ochsner and DeBakey.<sup>1</sup> The amebic hepatic abscess was found to be sterile in 84.6 per cent of their cases. The prognosis of the lesion is governed by four factors: (1) multiplicity of lesions, (2) presence or absence of complications, (3) presence or absence of secondary infection, and (4) type of therapy employed. In Oschner and DeBakey's cases from Charity Hospital, New Orleans, they found the mortality was 100 per cent in 16 cases with multiple abscesses and 10.5 per cent in 124 cases with a single abscess. In this same series, in 39 cases with complications the mortality was 41 per cent and in 141 cases without complications the mortality was 8.5 per cent. When an amebic abscess becomes secondarily infected it must be considered prognostically and therapeutically a pyogenic abscess. In this series from Charity Hospital the over-all mortality of 181 cases of amebic abscess was 16 per cent, while there was a mortality of 72 per cent in 47 cases of pyogenic liver abscess observed at the same hospital. The type of therapy carried out by the surgeon may change the prognosis, such as inadvertently converting a sterile amebic abscess into a pyogenic abscess by contamination at the time of treatment. In Oschner and DeBakey's series the mortality following open drainage was 22.1 per cent and that following closed drainage was 3.6 per cent. These authors collected a series of 5,000 cases from the literature in which the mortality from open drainage was 43.1 per cent and from closed drainage was 5.6 per cent.

Keeping in mind the foregoing facts, the surgical treatment should consist of administration of emetine hydrochloride, the best drug for amebic ab-

cess and hepatitis. It is preferably given subcutaneously in daily doses of 1 grain until 6 to 10 grains have been administered. Following the preliminary course of emetine, aspiration of the abscess is the treatment of choice. This should be performed with sterile technic in the operating room. An immediate smear of the material obtained will determine if pyogenic organisms are present. By this method there is less chance of contaminating the abscess if it is sterile, whereas, if it is secondarily infected, immediate open drainage may be done. When open drainage is required, it should be instituted in such a manner that the free pleural or peritoneal cavity is not contaminated.

In regard to this particular patient, I believe the open drainage was indicated, since the abscess was secondarily infected from the colic and duodenal fistulae. He should have had emetine, but even then I think the prognosis would have been poor.

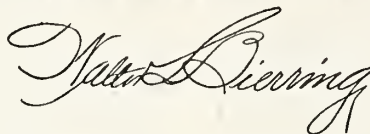
*Dr. Watters:* Have we had any previous cases of amebic liver abscess in this hospital?

*Dr. Bartels:* Yes, there are two other cases in our hospital records. The first was a 53 year old white male who was admitted to Surgery in 1940. His complaints were diarrhea of two months' duration and pain in the right upper abdominal quadrant of three weeks' duration. The significant physical findings were fluid in the right chest, an enlarged liver, and a fungating lesion in the rectum. The diagnosis was inoperable carcinoma of the rectum with lung metastases. He was in extremely poor condition and died eight days after admission. Autopsy revealed extensive amebic infection of the colon, liver, and right lung. There was a large amebic hepatic abscess with erosion of the diaphragm and involvement of the lower right lung.

The second case was a 20 year old white male who was admitted to the Department of Medicine in 1943, complaining of diarrhea and pain in the right chest. On physical examination a fungating lesion in the rectum was noted. This was diagnosed by two staff members as carcinoma of the rectum, and surgical consultation was advised. However, the astute intern on the service was doubtful of this diagnosis and the next day was able to demonstrate active *Endamoeba histolytica* in the stools. During the course of treatment with amebicides the patient developed evidence of elevation of the right diaphragm with pain and tenderness in the right upper quadrant. A diagnosis of probable amebic liver abscess was made. Attempted aspiration was unsuccessful. However, the patient went on to recovery.

1. Ochsner, A., and DeBakey, M.: Amebic hepatitis and hepatic abscess; analysis of 181 cases with review of literature. *Surgery*: xiii:460 (March); 612 (April) 1943.

# STATE DEPARTMENT OF HEALTH



## RUBELLA REVEALED IN REPREHENSIBLE ROLE

Long regarded as among the mildest and least important of all communicable diseases, German measles has in recent years been considered as a chief causative factor to account for congenital cataract and other congenital abnormalities. Gregg<sup>1</sup> of Australia was first to announce in 1941 the close relationship between an attack of rubella in early pregnancy and the occurrence of certain congenital defects. In 1943 Swan<sup>2</sup> and associates reported on congenital defects in infants following infectious diseases during pregnancy.

A review of these and related articles is presented in the following paragraphs quoted from Edith Potter, M.D., of Chicago.

### RUBELLA AND CONGENITAL MALFORMATIONS

The fact that viruses are easily propagated in embryonic tissue has been known for many years, but not until Gregg in 1941 found an association between rubella in early pregnancy and congenital defects of the eyes and heart was it recognized that virus diseases might be the cause of certain human malformations.

Gregg reported 78 infants with congenital cataracts, all but 10 of whose mothers gave history of rubella during early pregnancy. The majority of these infants were small, poorly nourished, and were difficult to feed. In all but 16 the cataracts were bilateral and in at least 44 there was some evidence of a cardiac malformation. All were born in Australia and most of the mothers had been exposed to rubella during a single epidemic.

In a subsequent paper, Swan and his coworkers reported 13 additional women affected with rubella in the early months of pregnancy, 11 of whose offspring had congenital defects. These consisted largely of cataracts, microcephaly, and deaf mutism. In 1944 Reese, Rones, and Erickson each reported a few cases in the United States sim-

ilar to those observed in Australia. Reese recorded three cases of congenital cataracts, all associated with cardiac disturbances, in infants whose mothers had had rubella in early pregnancy. Rones reported two infants with congenital cataracts whose mothers had had the infection during the second month of pregnancy, and two with glaucoma where the infection had occurred during the third month. Erickson observed ten infants with cataracts and one with microphthalmia. Ten mothers had had rubella in the first two months of pregnancy, one at two and one-half months. Nine appeared to have congenital cardiac defects.

In discussing the papers by Carruthers and Gregg, Vickery presented data on 21 infants with variable degrees of deafness. Twenty mothers had had rubella (and the other was presumed to have had it) during the first three months of pregnancy. Thirteen gave evidence of congenital heart disease; all were nervously unstable, but none had eye defects.

Almost all women with rubella in the first two months of pregnancy give birth to defective children; when the disease occurs later, the infant is less prone to be affected, but eye defects have followed its occurrence in the third month, and ear defects its occurrence in the fourth month.

If a single epidemic in Australia produced more than 200 defective children, the prevention or control of similar epidemics in other parts of the world becomes a challenge to all individuals interested in public health.

*From an article entitled "The Rh Factor, Vitamin K and Rubella Virus, in Relation to Infant Mortality and Morbidity," by Edith L. Potter, M.D., Ph.D. (Department of Obstetrics and Gynecology, The University of Chicago and the Chicago Lying-In Hospital, Chicago, Illinois) in the American Journal of Public Health, xxxvi:101-109 (February) 1946.*

1. Gregg, N. M.: Congenital cataract following German measles in mother. *Tr. Ophth. Soc. Australia* (1941) iii:35-46, 1942.

2. Swan, C., Tostevin, A. L., Moore, B., Mayo, H., and Black, G. H. B.: Congenital defects in infants following infectious diseases during pregnancy, with special reference to relationship between German measles and cataract, deaf mutism, heart disease and microcephaly, and to period of pregnancy in which occurrence of rubella is followed by congenital abnormalities. *M. J. Australia*, ii:201-210 (September 11) 1943.

## MORE IMMUNE SERUM GLOBULIN AVAILABLE

During the past weeks, the Serum-Plasma Center of the State Department of Health has dis-



tributed large amounts of convalescent serum and immune serum (gamma) globulin, in response to requests from attending physicians and local health officials.

The biologic preparations mentioned are used to modify the attack of measles in susceptible children and adults following exposure to the disease; also to prevent illness due to measles where infants are concerned, or older children whose resistance may be lowered by some concomitant ailment.

The Center is prepared to ship more immune globulin to attending physicians in counties where measles is unduly prevalent at this time. The disease has become epidemic in northern Iowa and in southwestern counties of the state.

The State Department of Health enlists cooperation of physicians, public health nurses, and parents in the reporting of cases of measles which are known to occur.

RECOGNITION OF BRUCELLA MELITENSIS IN IOWA

*Brucella suis* and *Brucella abortus* were for years believed to be the only species of *Brucella* to occur in Iowa. Although *Brucella melitensis* was isolated from the blood of a patient hospitalized in Iowa in 1930, this individual was a Mexican; the *melitensis* infection was probably acquired in Mexico, since the onset of illness developed only a few days after the patient had left his native country.

Infection due to *Brucella melitensis*, of relatively frequent occurrence in Mexico and southwestern states, was always considered foreign to this section of the Midwest. However, *Brucella melitensis* is now known to be endemic in Iowa; between December 1943 and December 1, 1945, the *melitensis* species of *Brucella* was isolated from the blood of thirty-two Iowa persons.

For the successful isolation of *Brucella* strains in Iowa and particularly of *Brucella melitensis*, full credit must go to I. H. Borts, M.D., Director of the State Hygienic Laboratory. Since July 1944, Dr. Borts has employed a tryptose broth medium modified from that devised by Sellers and Morris and by Bohls and Schuhardt, a technic which renders possible the isolation of *Brucella* strains not alone from blood cultures but also from the blood clot contained in the specimen which the physician forwards to the laboratory for the agglutination test.

In a series of twenty brucellosis *melitensis* cases investigated in Iowa during 1945, ten were packing house workers; the remaining ten were farm workers or visitors on farms. Only seven of the

twenty patients gave a history of contact with sheep, and none with goats. Twelve, or 60 per cent of the patients were in direct contact with hogs only prior to onset of illness, and gave no history of contact with sheep. Epidemiologic findings rendered it highly probable that hogs, in addition to serving as the usual reservoir for *Brucella suis* would prove to be susceptible also to *Brucella melitensis*.

In January and February of this year (1946) investigation of a case of brucellosis caused by *Brucella melitensis*, and examination of animals suspected as the source of infection, led to the isolation of *Brucella melitensis* from tissues of hogs in Iowa. The patient, W. N., age 32, a farmer living in Humboldt County, gave the history of direct contact with cows and hogs but had no such contact with sheep or goats. Examination of eighteen cows on the farm showed negative agglutination reactions; four sows were tested and two were found to be reactors.

On February 13, 1946, through courtesy of managers of the Tobin Packing Company, Fort Dodge, tissues were removed from twenty gilts from the farm of this patient. During succeeding days, Sam H. McNutt, D.V.M., Professor of Veterinary Research, Iowa State College, Ames, isolated twelve strains of *Brucella* from the swine tissues. Eleven strains were recovered from lymph glands, the twelfth from a spleen. Cultures of the twelve strains were forwarded to the State Hygienic Laboratory for species identification; all strains proved to be *Brucella melitensis*.

This is the first time in Iowa and so far as known in the United States that *Brucella melitensis* has been isolated from tissues of naturally infected swine.

MORBIDITY REPORT				Most Cases Reported From
Disease	Mar. '46	Feb. '46	Mar. '45	
Diphtheria .....	18	17	20	Dubuque, Chickasaw, Clinton
Scarlet Fever ...	248	237	367	Polk, Woodbury, Scott
Typhoid Fever ..	0	0	0	.....
Smallpox .....	3	2	1	Cedar, Davis, Dubuque
Measles .....	540	146	216	Hancock, Winnebago, Cerro Gordo
Whooping Cough	44	27	11	Dubuque, Linn, Scott
Brucellosis .....	*54	0	33	Cerro Gordo, Pottawattamie, Bremer
Chickenpox .....	153	110	462	Dubuque, Muscatine, O'Brien
German Measles.	49	37	5	Guthrie, Adair, Boone
Influenza .....	0	0	0	.....
Malaria .....	31	41	3	Polk, Black Hawk, Dallas
Meningococcus				Winneshie, Cedar, Iowa
Meningitis ....	8	17	10	Des Moines, Dubuque, Story
Mumps .....	226	123	393	Polk, Black Hawk, Marion
Pneumonia .....	21	23	25	.....
Poliomyelitis ...	0	1	0	For the State
Tuberculosis ....	55	53	60	For the State
Gonorrhea .....	193	183	263	For the State
Syphilis .....	180	152	96	For the State

\*Delayed reports.

# The JOURNAL of the Iowa State Medical Society

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## THE ANNUAL MEETING

Another successful gathering of the Iowa State Medical Society has been completed. This convention was the ninety-fifth in sequence, although last year there was only a meeting of the House of Delegates. Particularly noteworthy this year was the large number of service physicians who have resumed their practices in the various cities throughout the state. The return of so many familiar faces which have been absent during the war years lent an unusually happy atmosphere to the whole convention. In contrast to former meetings, very few military uniforms were in evidence. The total registration was 1,016, of whom 698 were members, 75 were guests, 116 were exhibitors, and 127 registered at the Woman's Auxiliary meeting. The presence of Major General Paul R. Hawley, Surgeon General of the Veterans Administration, was greatly appreciated by all of those in attendance. General Hawley made four addresses during his visit and impressed everyone with the sincerity of those in charge of the administration policies of the Veterans Administration. The House of Delegates approved the appointment of a committee to negotiate with the Veterans Administration for a contract which would allow any licensed physician of the state to render professional care in his own community to a disabled veteran for service-connected disabilities. Senator B. B. Hickenlooper, another guest of the Society, addressed the group at the evening meeting and clarified the pending legislation in Washington regarding several bills under consideration in

Congress at the present time. We were also happy to have with us Dr. A. S. Bristow, president of the Missouri State Medical Society, who had recently returned from Washington where he attended committee meetings in which testimony was being given on pending health legislation.

All the scientific sessions were well attended and the addresses were well received. Many favorable comments were heard regarding the guest speakers. The scientific exhibits this year merited special note, for they were outstanding in their character. The material was thoughtfully arranged and the attendants who generously devoted the major portion of their time at their displays were well rewarded by the interest and appreciation they received. A representative group of motion picture films was as usual in constant showing throughout the two days of the convention. The commercial exhibits were of high quality and conveniently located. The constant presence of physicians at the various displays during the session kept the exhibitors pleased with their participation. Mention should be made of the hobby show where exhibits by returning service physicians predominated. These exhibits consisted of collections of sea shells, metal work in enemy ammunition, plastic and wood work, and painting.

As usual the golfers gathered the day preceding the official opening and added another enjoyable afternoon to their long record of competition. Dr. Edward L. Emerson of Muscatine was elected president and Dr. Leslie L. Carr of West Union, secretary, of the golfers association for the coming year.

The Woman's Auxiliary again reported an enthusiastic attendance at its sessions. Mrs. Fred Moore was named president-elect of the group.

The business of the Society as transacted in the House of Delegates will be published in full in the July issue of the Journal. Dr. Harold A. Spilman of Ottumwa was named president-elect, and it was announced that Des Moines was again selected as the place for next year's meeting. The retiring president, Dr. R. D. Bernard, was signally honored by the presentation of a Leadership in Iowa certificate granted by the Des Moines *Register and Tribune*.

We are happy that so many attended the convention; it was nice seeing and meeting you again; we are sure you have returned to your homes better informed regarding the problems of the profession at the present time. A special word of thanks is tendered the various committees who spent so much time and effort in making this a successful session.



### HEADS UP!

In keeping with the tendency to dedicate certain periods of time, May 6 to 11 has been named as National Posture Week. There has been a growing tendency for various organizations to point out the importance of proper body mechanics. For instance, certain insurance companies have circulated posters to demonstrate proper methods of lifting; certain garment manufacturers have distributed posters designated to spread the doctrine of physical fitness and better body mechanics. These efforts serve only to emphasize to the public that the physician, because of his scientific training, is in a better position to recognize body deformities than the popular physical culturist or irregular practitioner.

The search for the strong, healthy, well poised physique was promoted in Greece and has been carried down through the ages. The deplorable effect of poor general health on body mechanics, with the resulting lack of muscle tone, lowered threshold of fatigue, and diminished available mechanical and emotional energy, serves only to emphasize that efficient use of the body is most favorable for general health and well being. The body, like any other machine, can be mechanically efficient only when all of its parts can be most readily maintained in equilibrium. The human form is a composite of balanced forces and is the outgrowth of a slow evolution, during which time men assumed the biped pattern. Phelps pointed out that the starting point for efficient, graceful, strong movement must be equilibrium, which, when maintained by the body in the upright standing position, must be an active and not a passive function. Energy used to maintain unstable active equilibrium is wasted and must therefore be subtracted from energy available for physical activity and nervous stability. There can develop unequal strain upon ligaments and muscles about the joints which, when maintained over long periods of time, may injure the bones themselves and affect unfavorably the circulation of the blood to the joints and soft tissues. It is only when man assumes the fully erect posture that full expansion of the lungs is possible. It is also a fundamental fact that the body should be in balance whenever active or at rest, irrespective of its special anatomy. According to Steindler, in pathologic types of posture the deflection of the line of gravity in relation to the spine persists and results in abnormal relations to sacro-iliac, hip, and knee joints, balance being ultimately recovered by the position of the feet. While correction of the position of the feet alone has value, this is not effective often

as a solution of the whole problem of body mechanics.

The greater number of normal children need no attention to their body mechanics during their preschool years, providing they are properly fed and protected during and after acute illness, and no mechanical force such as that applied by shoes, bed and chair, and especially by overfatigue, is allowed to interfere with normal development. Hence the pediatrician has the peculiar advantage of observing large numbers of normal children during the period of growth. The upright posture of the child is not so far removed from that of the quadruped as is that of the adult. As Sweet has pointed out, the obstacles which most commonly must be overcome before the complete upright posture can be attained are: (1) short calf muscles or, occasionally, too long calf muscles, (2) short hamstring muscles (biceps, semimembranosus, semitendinosus), (3) weak, undeveloped external rotators of the thigh, (4) weak, undeveloped glutei, (5) weak, undeveloped muscles of the abdominal wall, (6) strong, overdeveloped erector spinae muscles in the lumbar region and correspondingly weakened members in the dorsal region, (7) strong, short, overdeveloped anterior shoulder girdle muscles, and (8) forward thrust of the head, with shortening of the upper trapezius and splenii muscles. Much can be done to prevent these deformities in young children, and they can be corrected or greatly reduced in nearly if not all normal children.

Children can be taught to use correct posture when standing, walking, or sitting by correcting the position of the feet, rotating the pelvis anteriorly, and extending the head to its full height. Emphasis on these three points alone produces excellent results.

It must not be overlooked that good posture, to a considerable degree, is dependent upon mental and emotional factors as well as muscle tone. Hence, parents should be advised that more intelligent methods should be employed than nagging and constant repetition of "stand up straight," or "throw back your shoulders," or "don't hump over like that." Some children resent the fact that they are taller than their companions, and to compensate assume a stooping posture. The wrong type of chair in the school or home can account for development of functional scoliosis. The habit of sitting correctly, with the posterior hips touching the chair back and the trunk at right angles to the hips, is the least tiring position. The knowledge of correct posture and body mechanics can and should become a part of daily

life. To bring about this highly desirable condition among his patients, the physician must have (1) a clear, definite idea of the best posture and use of the body which can be attained, (2) a clear understanding of the obstacles within the body as well as those of environment to be overcome, and (3) a sound simplified method of teaching which can be understood by parents and children and which for practical purposes is not too time consuming to be used in office practice. The ideal upright posture is one in which the feet are parallel at a comfortable distance apart with the weight voluntarily shifted toward the fifth metatarsal bone if pronation is marked, the pelvis rotated anteriorly, with full extension of the dorsal and cervical spine accompanied by elevation of the chest and head, and the weight carried slightly forward. When a patient first attempts to stand in correct upright posture, this position is strained and awkward, but it becomes increasingly easy and comfortable as faults in posture are corrected. Correct posture has the very great advantage of being easily carried over into walking, running, and sitting. The individual who stands with head up presents a picture of confidence, alertness, and general well-being, and is prepared to cope with any situation which may arise. With the emphasis on physical fitness engendered during the war emergency, the public is being trained more and more to rely on the family physician for advice regarding body mechanics.

#### FIRST ANNUAL NATIONAL CONFERENCE ON RURAL HEALTH

Through the combined efforts of the National Farm Bureau and the American Medical Association, the first of what is hoped will be a series of Annual Conferences on Rural Health was held in Chicago on March 30, 1946. Present were the men and women who had been appointed by the two organizations to head their national committees on this subject, as well as representatives of the Farm Bureau and the Medical Societies of the various states.

The purpose of the conference was not so much to develop any plans as to state the problems involved, get various ideas as to possible lines along which to work toward the solution of the problems found, and to provide a common ground for the two organizations to present their side of the question. As such the meeting was a great success, and it should be the starting point for some worthwhile developments in improving the medical care and the health of the rural people.

Throughout the prepared addresses there was a great unanimity of opinion as to the general

problems involved in rural health and medical services. These were: (1) the shortage and unequal distribution of physicians, (2) inadequate hospital facilities, (3) the presence of large areas of very low farm income, (4) the difficulty in paying for hospitalization and major medical care, (5) lack of health education, and (6) failure of the farm group to use the facilities already available. These questions were all discussed, and possible lines of solution mentioned. Each of the subjects contains sufficient material for a lengthy discussion. Many of them could be discussed at county medical societies, based on the local needs, to very good effect. A few of the points brought out in the discussion at the Rural Health Conference might be mentioned here as starting points for further discussion and study.

Attempts to solve the matter of unequal distribution of physicians have been many. The cause of this is not only the matter of financial remuneration. Many physicians have left a lucrative practice in a small community to take up a less profitable one in a larger city, and have been well satisfied. There must be adequate financial return, but there must also be better schools for the physician's family, better means of getting around to see patients than plowing through mud roads, better opportunities for consultation and discussion with the physician's fellow practitioners, in fact a better opportunity to live the type of life which is soul satisfying to the professional man.

Hospital facilities are woefully inadequate in many areas. In discussing this matter there has been too great a tendency to base it on a county unit. It should be based on other factors such as distance to the nearest hospital, regardless of county lines, road conditions and, above all, availability of medical men to staff a hospital properly. A hospital in every county seat in the United States would not be a desirable goal, but hospitals so located that they are never more than one or two hours' drive, under normal conditions, might be the proper distribution.

The large areas of low farm income in certain states present a serious problem. It is admitted that many of these will have to have aid from Federal or State sources in order to finance their hospital, public health, and medical care programs. It was the stated opinion of several speakers, both medical and lay, that these areas would generally prefer to develop and conduct their own program, financing it as far as they could, and using only what outside funds were absolutely necessary. The farmer is fundamentally an independent individual (in this respect resembling the doctor) and, fol-



lowing some experiences with various governmental agencies, is not at all certain that he desires to have the Federal Government conducting his medical care program.

In the discussions there was a general agreement that the Blue Cross and medical care plans so far developed were doing a very good job. It seemed to be felt that if these could be made more generally available to the farm groups they would go a long way toward solving many of the problems. These plans, in many states, are now offering their services to the farm groups. This needs more development in most states and will require a general publicity program to be widely enough adopted to take care of a large percentage of the rural population. Iowa is now trying the medical care plan in one or two counties, but it should be made quickly available to others. It must be shown that voluntary insurance can be developed sufficiently to take care of a large percentage of all classes of the population.

Health education, covering all phases of the subject, was felt to be a great need. It must be carried out by the farm and medical organizations, working hand in hand. Some of this is a function of the Public Health Service. The matter of formation of county or district health units, under the supervision of trained personnel, was discussed briefly by Lt. Col. John R. Mott, now in charge of medical work for the Farm Security Administration. He discussed the matter rather sketchily, and in it was supported in general by the members of the conference. However, he did not do the subject justice, due to the fact that he spent well over half of his time presenting the arguments in favor of the proposed federal medical care plan.

Following the formal meeting, the physicians in attendance met together and discussed the developments to date in the various states. All medical societies seem to be just getting well started on their program of rural medical service. It was felt that plans should be developed through the state societies in conference with the various farm organizations. The Committee on Rural Health and Medical Care has just been appointed in Iowa. This committee has already had one meeting with a similar committee of the State Farm Bureau. In this meeting it was found that the general positions of the two organizations on health matters were very similar. It was felt there was great promise that the two organizations could work together amicably to improve materially the availability of medical care, the provision of hospitalization, and the general adoption of the principle of voluntary prepayment for medical and hospital care.

## CANCER MANUAL

May we point out that a most informative cancer manual for the public has been prepared by the Cancer Committee of the Iowa State Medical Society and is being distributed by the Division of Cancer Control of the State Department of Health, in cooperation with the Iowa Division of the Field Army of the American Cancer Society. The purpose of this manual is to place in the hands of a large number of people some useful facts about cancer, especially facts which every intelligent person should know for his own protection. The manual takes up the special problems of this disease in the state of Iowa. It goes on to describe what cancer is, its causes, and the efforts being made for control through research. Special attention is directed to cancer of the skin, lip, mouth and tongue, breast, gastro-intestinal tract, uterus, genito-urinary tract, and other less common cancers. Early diagnosis is described and information furnished regarding methods of treatment and the results of that treatment.

Mr. A. H. Blank of Des Moines, founder of the Raymond Blank Memorial Hospital and well known for his interest and generosity toward the aims of organized medicine, has just completed his work as state campaign chairman to raise funds toward an expected national goal of \$12,000,000. The budget outlined for the state of Iowa for 1946 amounts to \$122,544. To obtain this sum, the quota for Iowa requires a total of \$204,000 for, of all funds obtained in the state, 60 per cent remain in Iowa and 40 per cent are forwarded to the American Cancer Society. Considering that two billion dollars were spent recently to produce an atomic bomb, the twelve million goal anticipated is little enough to cope with the problems of a disease which is responsible for the death of 175,000 Americans annually. Actuarial tables indicate that seventeen million Americans will eventually succumb to this disease unless active measures are instituted.

Distribution of the cancer manual for the public is free, and has no connection with the campaign for funds which has just concluded. This informative manual should be welcomed by all citizens of the state of Iowa, and it behooves the medical profession to assist in its distribution.

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## ACADEMY OF PEDIATRICS STUDY OF CHILD HEALTH SERVICES

The American Academy of Pediatrics at its annual meeting in St. Louis in November 1944 approved a plan of its Committee on Child Health in the Postwar Period to make a study of the

## YOU AND ME!

FREDERICK M. MEEK, D.D., Des Moines

I suppose that in order to be in the closest rapport with the occasion and with the times, I should give an address to the Polk County Medical Society dealing with the temperature of the nation, the respiration of the world, the blood pressure of Congressmen, the pulse of presidents and cabinet ministers, or perhaps give consideration to "The Organic Diseases of Democracies," or even give some brief word directed by a circuitous route to the Republican party, on "The Care and Feeding of Voters." But I shall not attempt anything as far ranging or difficult as these possibilities which I have suggested. Rather I would do something a little more modest that still has a good deal of relevance: talk about "you and me."

It would be undiluted presumption on my part to tell you who you are. Actually if you do not know, it is now too late to do anything about it! But perhaps you will bear with me if in an indirect way I try to indicate who I am. As a matter of fact that is a perplexing problem to many people.

One day a small boy pointed to the minister and he asked: "Mother, who is that man?" "Hush, darling," she said, "that's the man that married me." To which the boy replied: "Well, then, what's Pa doing hanging around our house all the time?" There are other people equally perplexed!

There was a time when you and I had a good deal to do with each other—a good deal more than we do at the present time. In the year 300 A.D. the first hospital was founded under Christian auspices in the City of Jerusalem. In those days it was called a "hostel." But as the Pilgrims came to Jerusalem, many of them suffering from the effects of arduous journeys, the hostels had to attempt to take care of the sick. Later, the hostels, or hospitals, had a separate section built for this work with the sick. These parts of the hospitals were called "infirmaries." And for most of the Christian era, nearly all the medical care and the nursing care was provided by, or under, the auspices of the Church. And it is only in comparatively recent times that the city and state and private hospitals have come into existence, and that scientific medicine has come into its own. It is well, and it was inevitable, that there should

have been this separation of function between the Church and medicine itself.

The farsighted amongst us approved of what went on, and to use a strange figure of speech, "blessed the divorce." Actually, however, it was in those countries where the people concerned were the most faithful to the Christian admonition, "Ye shall know the truth, and the truth shall make you free," that scientific medicine and adequate care for the sick developed to the highest degree, and came into its own. That fact is simply a matter of historical record.

In our time there are people who disagree with you and what you represent, even as there are people who disagree with me and what I represent. Both sets of disagreement arise out of much the same kind of soil: sloppy thinking, emotional biases, single unfortunate experiences transferred into broad generalizations of condemnation, a failure to understand that both you and I continually move and grow in depth of thinking and experience and practice; and that in 1946 we should not be judged by our predecessors in 1920 or 1870, as if we had not moved or thought since then.

Tonight I wish to suggest with due and appropriate modesty that you have an ally, and in many instances a co-worker, of some considerable value, in the people of the calling whom I represent. From time to time, as we move about in the framework of society, our paths cross. Actually this happens with a greater frequency than perhaps some of you realize. I believe that we should at least hail each other as we pass, with some measure of understanding and appreciation.

I am reminded of an experience of a summer resident on the coast of Maine. This summer resident was out sailing in a sloop with an old Maine fisherman. They passed a schooner heading for the harbor. She very evidently was returning from a long and trying voyage. The Maine sea-captain was smoking his pipe. He took it out of his mouth long enough to say to the young man at the wheel of the schooner: "Howdy do?" The young man on the schooner took his pipe out of his mouth and said: "Nicely." Each boat kept on its course. After a little interval, the Maine sea-captain said to the summer resident: "She's been in southern waters. That's my boy. Ain't seen him for nearly two years."

Minister, Plymouth Congregational Church, Des Moines, Iowa.  
Address presented before the Polk County Medical Society at its Annual Meeting in Des Moines January 16, 1946.



And that was all. But as they passed, they had hailed each other with a deeper measure of understanding and appreciation than appeared on the surface. That I commend to you and me.

You and I are both interested in people. We are interested in people in need. And we are interested too in the healing and strengthening resources of the universe. Actually the problem of life and of health is the problem of maintaining or establishing proper relations with the world in which we live. That is the art and science of medicine. That also is the heart of the life and the art and the science that I represent.

The practice of the medical profession is in part based on a recognition of the great value of individual human personalities. It says that the individual is worth doing something for, that his life is worth struggling for with all the science and all the skill that our civilization has been able to discover. The whole science of healing is based on the premise that an individual is worth anything we can do to save his life. (And, I would comment that this belief in the infinite value of a human being has come into our civilization by way of the faith and the life I represent.)

I have said that we are both interested in people. I say that with a measure of deep feeling, based upon experience. Because time after time, before you do your work for people, they come to me. And after you have done your work—sometimes successfully—sometimes unsuccessfully because no human skill was sufficient—they come to me, or at least they send for me. Your patients, your people—yes! But, gentlemen, they are my people also—mine very often for a longer time than they are yours!

It is part of my duty and obligation to provide these people with resources for life and living. Those resources should enable them to meet the circumstances of life with courage and with poise of spirit and peace of mind, including the crisis-experience in which you are called to assist them. Sometimes—many times—I have failed here to do what I should have done. That has happened because of personal inadequacy on my part, sometimes because of a lack of cooperation and a lack of faith on their part. And sometimes, as you yourselves so well know, many of these people stay at far distance from doctors—and they do from me—for they regard us both as being simply “crisis” people—called in, in a crisis. And then of a sudden, they expect me in the areas of courage and faith and foundation for life to extemporize resources for them, and they expect you, out of some medical legerdemain, to extemporize

health from the wasted resources of their bodies and their defeated spirits. And we both try!

But when those resources for life and living are there they make an enormous difference. One of the greatest surgeons in American, in a letter about the dearest person I have on earth, wrote: “I don’t know how it will come out, but . . . (and he gave the name of the person) has the finest set of interior resources I have ever seen, and I rather think that that will be decisive.” And it was!

For the most part, we find ourselves working with the same people. We are both interested in them. We are interested in their welfare, in their health, and in their hopes. For myself I want to set what I do, in part at least, in the perspective of what you do. But the greatest wholeness of life for these people of our common interest will be achieved only when the relationship between us is reciprocal.

A former member of the faculty of the Harvard Medical School has said: “Where the doctor is most needed, in the acute cases and in the acute phases of chronic disease, the minister is least needed. When the minister can do most, as in chronic or ‘hopeless’ disease, and in convalescence, the doctor is most impotent.” That is true, but it is only part of the whole picture.

At some risk of being misunderstood I would be more specific as I speak about “you and me.”

The number of sick people whom a minister sees, both in homes and in hospitals, comes to be numbered by many thousands. Out of such an experience I have come to this personal conclusion: There is a greater degree of fear on the part of these people—usually unexpressed and unspoken—than most of us admit or realize. No small part of this fear is fear of “the unknown.” For when the average person comes into the crisis of sickness, and particularly when he enters the realm and the domain of the hospital, a fear of that strange world seizes hold of him. It is a world which to you of the medical profession is familiar and most ordinary, but to him it is a world that is strange and inexplicable. Beyond that, this is true. Few laymen ever enter the hospital, even for a minor cause, without some wondering in their minds about death—even though to you the idea might be utterly absurd. For many of these laymen, the wondering easily becomes a fear—sometimes expressed, sometimes shoved by main force down into the subconscious. And such fears can often get in the way of what you want to do. Time after time it has been my duty to help at that point, and (does it need to be said?) without mentioning the word “death” or the word “fear.”

Because of what I represent, it is possible for me to give confidence, confidence in you, and confidence in the healing powers of life, and confidence in the great Power of the universe whom men call God. Part of my duty is to reaffirm for people the truth that neither you nor they *are alone*, but that the creative and life-giving powers of life itself are on your side and on theirs; and on their side, no matter what the actual physical outcome of the experience may be. That is important!

To create that confidence may only require three or four spoken sentences—plus a presence—the presence of a man who *knows* and who himself actually *believes*. This is an area in which *I know*, an area in which these people of ours expect me to have knowledge, even as there are areas in which they expect you to know and to have knowledge. And because I, or someone like me, can bring such confidence, good comes of it.

A doctor once said to an alert, sensitive minister friend of mine: "I can always pick out the people to whom you have spoken, who come up to me for operations. They are more relaxed, more cooperative, and more confident."

Your main interest is in the physical-chemical side of the person concerned. And you try to fit the situation which you find into some one of the more than two hundred diagnoses with which your training has made you familiar. While these problems with which you are dealing are in progress, there are mental and spiritual problems also that are in progress within the same person's personality. They are frequently much more difficult to diagnose. Meanwhile your patient may be defeating both himself and you, because of his fear, or his loneliness, or his bitterness, or perhaps because of some feeling or obsession of guilt, which he ties, frequently irrationally, to his present circumstance of sickness. But once the tying has been done, it involves itself in his physical problem. There is no place on earth where the weight of these attitudes which I have just mentioned, loneliness, bitterness, guilt, fear, is as heavy, or as freighted with potential disaster, as in the sick room or in the hospital. There, in that strange world, confronted by a crisis, which very often has not been explained to him, the patient has unlimited time on his hands. And that situation stimulates morbid imaginings, aided and abetted by the instinctive human tendency to be obsessed with the fear of the unknown and of the future.

It is at this place, where the distinguished member of the Harvard Medical faculty said that you were most impotent, that my opportunity comes to set life in its perspective, to give a measure of

meaning to life—both in its past and for tomorrow—to show that the world is not of necessity falling to pieces because of this present experience, and to make real and vivid and available the healing resources of God for mind and spirit, even as you make them available through your technics, for his body.

But do not imagine that what I seek to do is done even primarily through the medium of speech. I trust that I, and those who share my calling with me, realize what you know: that too much speaking can be a disastrous irritant, both to the well and to the sick. I have already suggested what is indubitably true—that the presence of a man in whom people have confidence, as a man who knows about life and its problems and its destiny, is of help in itself. And oftentimes the importance of that presence is augmented, as the man says nothing and listens—listens sometimes to things which are left unsaid rather than things that are said; or listens more to the inflection than to the actual words; or listens to the sentences that are begun and never finished; or listens to the sentences partially spoken, which the person tries to call back to himself as if he had never spoken the words. But if I or someone else listens creatively, and not just passively, good comes of it.

There is an old proverb that says: "Defend the absent." May I share a secret with you? You would be surprised how often I have had to say a good word for some of you—some of you who are here tonight—and you have never known that the word was spoken. It was inevitable that someone should grow querulous and questioning in the midst of the crisis of sickness, and that confidence in you and in what you were trying to do should be temporarily at a low ebb.

Please understand me. Any man who is in the calling in which I am, who is worthy of his name, avoids *always* discrediting or discussing any medical treatment, but I do very often say a word on your behalf personally, because it is imperative.

And yet while I do that, and others do that, there is a seemingly reticence on our part, even to say that word, lest someone misunderstand and accuse us of not minding our own business.

Once again I am reminded of one of the attitudes prevalent in the state of Maine. George Wharton Pepper in his autobiography, "Philadelphia Lawyer" relates this incident. "Your Maine native," he says, "is firmly determined to mind nobody's business but his own. At Northeast Harbor a footbridge connects the headlands of Gilpatrick's Cove. In the middle of the footbridge is a draw, intended to permit the passage of small sailboats. It is very seldom open. A blind piano



tuner was wont to use the familiar bridge in passing from one customer's cottage to another. A local friend told me one day that not long before the draw happened to be open, and while it was open he saw the blind man start across the bridge. "I says to myself," said my friend, "I shouldn't wonder a mite if he would walk off'n that bridge into the water." "What did you do?" I inquired. "Do?" he said, pityingly, "Do? I went about my own business, of course. Pretty soon I heard a splash—and it was him." "What happened then?" I asked, a trifle anxiously. "Oh, I fished him out," he said; "he wasn't a mite the worse."

Now you can make any application or draw any conclusion you desire from that story. But I do say with great earnestness: you will find, if you care to use him, that the minister of a particular patient can frequently be of great help to you.

Here, for example, is some particular situation, which you sometimes confront, that will require of this person a training of his will, a reorganization of his habits, a new point of view for his living. If you were to take the time to talk with that patient's clergyman—always being sure that he is a sensible man and not an arrogant fool, for arrogant fools do slip through into our calling sometimes—and tell him what your patient needs at this point of the reorganization of his life, I believe that you would secure some measure of help. Do this, mindful of the fact that perhaps for the next year or for the next five years, I or some other minister will be seeing this patient of yours anywhere from twenty-five to fifty times a year. Suggest to this minister or to me that he or I do what we can to assist you in your program for this person, whose welfare is both your desire and ours. Don't expect any magic. And don't expect any great help in the case of a person to whom the church and its offices and myself are nearly complete strangers. But even then, there are times when help can be given. But where there is a rapport that has grown up over the years, you have potentially a very valuable ally.

I heard not long ago of a funeral which had been conducted by a chaplain of one of the fraternal lodges. And he gave some evidence of lacking in understanding and background, for in the midst of his oration he said: "To what shall I liken my deceased brother? I can't liken him to the sun, for the sun shines only in the day; and he shone at night as well as in the day. I can't liken him to the stars, for the stars shine only at night; and he shone by day and by night. And I can't liken him to the moon, for the moon is full only part of the time, but he was full all the time."

Understanding and background and breadth of

training and culture prevent many a blunder. The background increases the "apperceptive" mass, and it stimulates sensitivity.

Attempts are being made in America to provide people like me with a background that will enable us to understand more clearly what you and people like you try to do. There are some theological seminaries which, with the approval of hospitals and doctors in the area, send the theological student into the hospital for a reasonable period of time to serve as an orderly. The fact that these men are theological students is never made known to the patients. Later, their theological course includes a six months' class of orientation to the hospital by the hospital staff, a four or five months' class in the meaning and prevention of disease by the hospital staff and medical leaders. And still later there is a type of internship served in these hospitals under the general direction of some of the most capable Protestant chaplains in hospitals in America. (I am conscious that a good many medical students would be better doctors for having had some work in theology—the relation of people to the universe—and in the study of human relationships, as those subjects are given in the modern Divinity School.)

I make bold to suggest that you could render valuable service to yourselves and the community by perhaps taking the initiative in making possible a gathering once or twice a year that would include you and me and people like me, a gathering with outstanding leaders in your field and in mine—a doctor and someone like Russell Dicks of Chicago, one of the great Protestant hospital chaplains of America, or Carroll Wise of the Hennepin Avenue Methodist Church in Minneapolis.

It might give you the opportunity to get some things off your chest and, if necessary, to give ministers the devil. If any of them object, ignore them and let them go. You couldn't do anything with them. Ossification of the sense of humility is fatal!

And it might be that a few of us might revert to type, and give you the devil also. But two negatives make a plus, and it all would produce a positive result.

And so I end as I began, by reasserting that usually the people with whom you have to deal are the people with whom I have to deal. We are interested in them as people, we desire for them health and life and wholeness of personality. And the job is best achieved—it will only finally be achieved completely—when what we do for the same person is complementary to each other's effort.

## COUNTY MEDICAL SOCIETY OFFICERS

COUNTY	PRESIDENT	SECRETARY	DEPUTY COUNCILOR
Adair.....	A. J. Gantz, Greenfield.....	A. S. Bowers, Orient.....	A. S. Bowers, Orient
Adams.....	A. W. Brunk, Prescott.....	J. H. Wallahan, Corning.....	A. W. Brunk, Prescott
Allamakee.....	J. W. Myers, Postville.....	J. W. Thornton, Lansing.....	J. W. Thornton, Lansing
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Buena Vista.....	F. C. Foley, Newell.....	T. R. Campbell, Sioux Rapids.....	H. E. Farnsworth, Storm Lake
Butler.....	F. O. Rolfs, Parkersburg.....	F. F. McKean, Allison.....	Bruce Ensley, Shell Rock
Calhoun.....	P. W. Van Metre, Rockwell City.....	J. H. Faust, Manson.....	K. G. Hinrichs, Manson
Carroll.....	W. A. Anneberg, Carroll.....	J. R. Morrison, Carroll.....	W. L. McConkie, Carroll
Cass.....	R. M. Needles, Atlantic.....	W. F. Giegerich, Atlantic.....	
Cedar.....	Fred Montz, Lowden.....	J. E. Smith, Clarence.....	P. M. Hoffman, Tipton
Cerro Gordo.....	A. B. Phillips, Clear Lake.....	D. L. Long, Mason City.....	G. J. Sartor, Mason City
Cherokee.....	M. F. Joynt, Marcus.....	D. C. Koser, Cherokee.....	C. H. Johnson, Cherokee
Chickasaw.....	J. M. Kerwick, New Hampton.....	J. E. Murtaugh, New Hampton.....	P. E. Gardner, New Hampton
Clarke.....	F. S. Bowen, Woodburn.....	C. R. Harken, Osceola.....	H. E. Stroy, Osceola
Clay.....	E. E. Munger, Jr., Spencer.....	C. C. Colleser, Spencer.....	C. C. Colleser, Spencer
Clayton.....	P. R. V. Hommel, Elkader.....	T. W. Lichter, Edgewood.....	P. R. V. Hommel, Elkader
Clinton.....	R. T. Lenaghan, Clinton.....	Elsie R. Carrington, Clinton.....	R. F. Luse, Clinton
Crawford.....	E. V. Zaeske, Charter Oak.....	Dora E. K. Zaeske, Charter Oak.....	C. L. Sievers, Denison
Dallas-Guthrie.....	W. R. Van Duzer, Casey.....	S. J. Brown, Panora.....	E. J. Butterfield, Dallas Center
			S. J. Brown, Panora
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Dickinson.....	F. L. Roberts, Spirit Lake.....	Ruth F. Wolcott, Spirit Lake.....	T. L. Ward, Arnolds Park
Dubuque.....	A. J. Entringer, Dubuque.....	D. C. Sharpe, Dubuque.....	J. C. Painter, Dubuque
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Fayette.....	J. P. Gallagher, Oelwein.....	A. F. Grandinetti, Oelwein.....	C. C. Hall, Maynard
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Franklin.....	J. C. Powers, Hampton.....	F. L. Siberts, Hampton.....	J. C. Powers, Hampton
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Hancock-Winnebagos.....	C. V. Hamilton, Garner.....	W. F. Missman, Klemme.....	C. V. Hamilton, Garner
			G. F. Dolmage, Buffalo Center
Hardin.....	W. H. Van Tiger, Eldora.....	F. N. Cole, Iowa Falls.....	F. N. Cole, Iowa Falls
Harrison.....	R. H. Cutler, Little Sioux.....	F. H. Hanson, Magnolia.....	
Henry.....	J. S. Jackson, Mt. Pleasant.....	B. B. Gloeckler, Mt. Pleasant.....	S. W. Huston, Mt. Pleasant
Howard.....	W. C. Hess, Cresco.....	Abner Buresh, Lime Springs.....	W. A. Bockoven, Cresco
Humboldt.....	T. G. Herrick, Gilmore City.....	A. S. Arent, Humboldt.....	I. T. Schultz, Humboldt
Ia.....	M. W. Grubb, Galva.....	W. P. Crane, Holstein.....	E. S. Parker, Ida Grove
Iowa.....	F. C. Schadt, Williamsburg.....	J. J. Sinn, Williamsburg.....	I. J. Sinn, Williamsburg
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Jasper.....	L. P. Adams, Newton.....	T. D. Wright, Newton.....	R. W. Wood, Newton
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Keokuk.....	J. L. Doyle, Sigourney.....	John Maxwell, What Cheer.....	D. L. Grothaus, Delta
Kossuth.....	P. V. Janse, Algona.....	M. G. Bourne, Algona.....	J. G. Clapsaddle, Burt
Lee.....	J. R. Rankin, Keokuk.....	B. D. Van Werden, Keokuk.....	R. L. Feightner, Ft. Madison
			B. L. Gillfillan, Keokuk
Linn.....	C. S. Day, Cedar Rapids.....	D. S. Challed, Cedar Rapids.....	B. F. Wolverson, Cedar Rapids
Louisia.....	J. W. Pence, Columbus Junction.....	L. E. Weber, Wapello.....	J. H. Chittum, Wapello
Lucas.....	A. L. Yocom, Jr., Chariton.....	R. E. Anderson, Chariton.....	G. M. Throckmorton, Chariton
Lyon.....		J. H. Sherlock, Rock Rapids.....	S. M. DeYoung, George
Madison.....	H. E. Carver, Earlham.....	E. M. Olson, Winterset.....	C. B. Hicklenlooper, Winterset
Mahaska.....	G. W. Bennett, Oskaloosa.....	W. V. Campbell, Oskaloosa.....	E. B. Wilcox, Oskaloosa
Marion.....	V. J. Elliott, Knoxville.....	D. A. Mater, Knoxville.....	H. L. Bridgeman, Knoxville
Marshall.....	J. E. Sinning, Marshalltown.....	O. D. Wolfe, Marshalltown.....	D. Woods, State Center
Mills.....	W. A. DeYoung, Glenwood.....	T. E. Shonka, Malvern.....	D. W. Harman, Glenwood
Mitchell.....	M. O. Eiel, Osage.....	K. L. Whitley, Osage.....	T. S. Walker, Riceville
Monona.....	E. J. Liska, Ute.....	E. E. Gingles, Onawa.....	C. W. Young, Onawa
Monroe.....	H. J. Richter, Albia.....	T. A. Moran, Melrose.....	C. C. Fowler, Red Oak
Montgomery.....	L. R. Moriarty, Villisca.....	Helge Borre, Red Oak.....	Oscar Alden, Red Oak
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Page.....	H. McK. Bunch, Shenandoah.....	J. F. Aldrich, Shenandoah.....	W. H. Maloy, Shenandoah
Palo Alto.....	J. W. Woodbridge, Emmetsburg.....	P. O. Nelson, Emmetsburg.....	H. L. Brereton, Emmetsburg
Plymouth.....	M. J. Joynt, Le Mars.....	L. C. O'Toole, Le Mars.....	W. L. Downing, Le Mars
Pocahontas.....	W. F. Brinkman, Pocahontas.....	C. L. Jones, Gilmore City.....	C. L. Jones, Gilmore City
Polk.....	M. I. Olsen, Des Moines.....	E. W. Anderson, Des Moines.....	J. B. Synhorst, Des Moines
Pottawattamie.....	F. E. Marsh, Council Bluffs.....	G. V. Caughlan, Council Bluffs.....	G. N. Best, Council Bluffs
Poweshiek.....	H. C. Parsons, Grinnell.....	C. E. Harris, Grinnell.....	C. E. Harris, Grinnell
Ringgold.....	O. L. Fullerton, Redding.....	J. W. Hill, Mt. Airy.....	E. J. Watson, Diagonal
Sac.....	W. I. Evans, Sac City.....	C. D. Gibson, Sac City.....	J. R. Dewey, Schaller
Scott.....	W. C. Goenne, Davenport.....	J. H. Sunderbruch, Davenport.....	A. P. Donohoe, Davenport
Shelby.....	Carl V. Bisgard, Harlan.....	A. L. Nielson, Harlan.....	A. L. Nielson, Harlan
Sioux.....	E. B. Grossmann, Orange City.....	C. B. Murphy, Alton.....	Wm. Doornink, Orange City
Story.....	L. E. Rosebrook, Ames.....	W. B. Armstrong, Ames.....	Bush Houston, Nevada
Tama.....	A. J. Wentzien, Tama.....	A. J. Havlik, Tama.....	A. A. Pace, Toledo
Taylor.....	W. H. Cash, Lenox.....	J. H. Gasson, Bedford.....	G. W. Rimel, Bedford
Union.....	J. A. Liken, Creston.....	C. E. Sampson, Creston.....	C. C. Rambo, Creston
Van Buren.....	Roscoe Pollock, Douds-Leando.....	L. A. Coffin, Farmington.....	L. A. Coffin, Farmington
Wapello.....	R. O. Hughes, Ottumwa.....	L. A. Taylor, Ottumwa.....	C. A. Henry, Farson
Warren.....	M. B. Cunningham, Norwalk.....	C. H. Mitchell, Indianola.....	C. H. Mitchell, Indianola
Washington.....	E. D. Miller, Wellman.....	W. S. Kyle, Washington.....	E. D. Miller, Wellman
Wayne.....	D. R. Ingraham, Sewal.....	C. F. Brubaker, Corydon.....	J. H. McCall, Allerton
Webster.....	J. N. Baker, Fort Dodge.....	W. C. Thatcher, Fort Dodge.....	H. E. Nelson, Dayton
Winnebuck.....	R. N. Svendsen, Decorah.....	H. H. Ennis, Decorah.....	L. C. Kuhn, Decorah
Woodbury.....	C. R. Watkin, Sioux City.....	R. C. Mugan, Sioux City.....	D. B. Blume, Sioux City
Worth.....	B. H. Osten, Northwood.....	M. P. Allison, Northwood.....	S. S. Westly, Manly
Wright.....	L. D. MacNaughton, Eagle Grove.....	J. R. Christensen, Eagle Grove.....	J. H. Sams, Clarion



# Roster of Iowa Physicians in Military Service

As of April 20, 1946

## Allamakee County

Ivens, M. H., Waukon (Miami Beach, Fla.).....Capt., A.U.S.

## Appanoose County

Condon, F. J., Centerville (Owensboro, Ky.)...Major, U.S.P.H.S.  
Edwards, R. R., Centerville (APO 758, New York,  
N. Y.) .....Major, A.U.S.

## Benton County

Senfeld, Sidney, Belle Plaine

## Black Hawk County

Ericsson, M. G., Cedar Falls (Ft. Snelling, Minn.)...Capt., A.U.S.  
Marquis, F. M., Waterloo (White Sulphur Springs,  
W. Va.) .....Capt., A.U.S.

## Boone County

Brewster, E. S., Boone (APO 254, New York, N. Y.)...Major, A.U.S.

## Breña Vista County

Witte, H. J., Marathon (APO 350, New York,  
N. Y.) .....Major, A.U.S.

## Butler County

James, R. A., Allison (Mare Island, Cal.)

## Carroll County

Freedland, Maurice, Coon Rapids  
Scannell, R. C., Carroll (Denver, Colo.).....Capt., A.U.S.

## Cass County

Schiff, Joseph, Anita (Walla Walla, Wash.).....Capt., A.U.S.

## Cedar County

Laughlin, R. M., Tipton (San Diego, Cal.).....Lt., U.S.N.R.

## Cerro Gordo County

Fitzpatrick, M. R., Mason City (Ft. Dix, N. J.)...1st Lt., A.U.S.  
Harris, R. H., Mason City (Cando, N. Dak.).....Major, A.U.S.  
†Harrison, G. E., Mason City.....Col., A.U.S.  
Morgan, P. W., Mason City.....Capt., A.U.S.  
Mullen, L. M., Mason City (Kansas City, Mo.)...Capt., A.U.S.  
Tice, G. I., Mason City (Mare Island, Cal.).....Lt., U.S.N.R.  
Tice, W. A., Mason City (Jacksonville, Fla.)...Lt. (jg), U.S.N.R.

## Cherokee County

George, L. A., Cherokee.....A.U.S.

## Clayton County

Glesne, O. G., Monona (Knoxville, Iowa).....Capt., A.U.S.

## Clinton County

O'Donnell, J. E., Clinton.....Lt., U.S.N.R.  
Speigel, I. J., Clinton (Galesburg, Ill.).....Capt., A.U.S.  
Wells, L. L., Clinton.....Capt., A.U.S.

## Dallas-Guthrie Counties

Butterfield, E. T., Dallas Center (Springfield, Mo.) Capt., A.U.S.  
Byrnes, A. W., Guthrie Center (Fort Custer, Mich.)...Major, A.U.S.

## Delaware County

Baumgarten, Oscar, Earlville.....Capt., A.U.S.

## Des Moines County

Eigenfeld, M. L., Burlington (Cleveland, Ohio)...1st Lt., A.U.S.  
Sage, E. C., Burlington (Fleet PO, San Francisco,  
Cal.) .....Lt. Comdr., U.S.N.R.

## Dubuque County

Anderson, E. E., Dubuque (Bradley Field, Conn.)...Capt., A.U.S.  
Cunningham, J. C., Dubuque (Fairfield, Ohio).....Capt., A.U.S.  
†Edstrom, Henry, Dubuque (Galesburg, Ill.)...Lt. Col., A.U.S.  
†Hall, C. B., Dubuque.....Capt., A.U.S.  
Lavery, H. B., Dubuque (Washington, D. C.)...Lt. Col., A.U.S.  
Leik, D. W., Dubuque (Wichita Falls, Tex.).....Capt., A.U.S.  
Mueller, J. J., Dubuque (APO 230, New York, N. Y.)...Capt., A.U.S.  
Painter, R. C., Dubuque (Cheyenne, Wyo.)...Lt. Comdr., U.S.N.R.

## Emmet County

Collins, L. E., Estherville (APO 247, San Francisco, Cal.).....1st Lt., A.U.S.

## Fayette County

Sulzbach, J. F., Oelwein  
Walsh, E. W., Hawkeye (Huntington, W. Va.).....A.U.S.

## Floyd County

Huber, R. H., Charles City.....1st Lt., A.U.S.  
Mackie, D. G., Charles City (Danville, Ind.).....Capt., A.U.S.  
Magdsick, Carl, Charles City (Green Cove Springs,  
Fla.) .....Lt., U.S.N.R.

## Franklin County

Hedgecock, L. E., Hampton (Camp Lejeune,  
N. Car.) .....Comdr., U.S.N.R.

## Greene County

Cartwright, F. P., Grand Junction (Colorado Springs,  
Colo.) .....Capt., A.U.S.

## Grundy County

Cullison, R. M., Dike (Fort Howard, Md.).....Major, A.U.S.

## Hamilton County

Mooney, F. P., Jewell.....Capt., A.U.S.  
Schrader, M. A., Webster City (Topeka, Kan.)...1st Lt., A.U.S.

## Henry County

Cogan, Samuel, Mt. Pleasant  
Dwankowski, Carl, Mt. Pleasant (APO 511,  
New York, N. Y.).....Major, A.U.S.  
Ristine, L. P., Mt. Pleasant (Denver, Colo.)...Major, A.U.S.

## Humboldt County

Coddington, J. H., Humboldt (APO 719, San  
Francisco, Cal.) .....Capt., A.U.S.

## Ida County

Martin, J. W., Holstein (Albany, Ga.).....Capt., A.U.S.

## Iowa County

Geiger, U. S., North English (Kansas City,  
Mo.) .....Lt. Comdr., U.S.N.R.

## Jackson County

Skelley, P. B., Jr., Maquoketa (APO 247, San  
Francisco, Cal.) .....1st Lt., A.U.S.

## Jasper County

Doake, Clarke, Newton.....1st Lt., A.U.S.  
Ritchey, S. J., Newton.....Lt. Col., A.U.S.

## Jefferson County

Frey, Harry, Fairfield (Norfolk, Va.).....Comdr., U.S.N.R.  
Graber, H. E., Fairfield (APO 75, San Francisco, Cal.) .....Lt. Col., A.U.S.  
Taylor, I. C., Fairfield (Washington, D. C.)...1st Lt., A.U.S.

## Johnson County

Albert, S. M., Iowa City.....Capt., A.U.S.  
Bunge, R. G., Iowa City (Orlando, Fla.).....Capt., A.U.S.  
Cobb, E. A., Iowa City (APO 14987, San Francisco, Cal.) .....1st Lt., A.U.S.  
Coburn, F. E., Iowa City (Toronto, Canada).....Capt., R.C.A.  
Crowell, E. A., Iowa City (Ft. Geo. Wright, Wash.)...Capt., A.U.S.  
Evers, L. B., Iowa City.....Major, U.S.P.H.S.  
Field, Grace E., Iowa City (Denver, Colo.)...Major, U.S.P.H.S.  
Flax, Ellis, Iowa City.....1st Lt., A.U.S.  
Francis, N. L., Iowa City (Annapolis, Md.)...Lt. (jg), U.S.N.R.  
Hartung, Walter, Iowa City (Springfield, Mo.)...Major, A.U.S.  
Hessin, A. L., Iowa City (APO 469, New York,  
N. Y.) .....Major, A.U.S.  
January, L. E., Iowa City (Monahans, Texas)....Major, A.U.S.  
Keislar, H. D., Iowa City (Washington, D. C.)...Capt., A.U.S.  
Laubscher, J. H., Iowa City (Ft. Benning, Ga.)...1st Lt., A.U.S.  
Moreland, F. B., Iowa City (Maxwell Field, Ala.)...1st Lt., A.U.S.  
Ringrose, E. J., Iowa City  
Sells, R. L., Jr., Iowa City (Palmdale, Cal.).....Capt., A.U.S.  
†Springer, E. W., Iowa City (APO 678, New York,  
N. Y.) .....Capt., A.U.S.  
Stump, R. B., Iowa City (Denver, Colo.).....Capt., A.U.S.  
Titus, E. L., Iowa City (Los Angeles, Cal.).....Col., A.U.S.  
Trapasso, T. J., Iowa City (APO 520, New York,  
N. Y.) .....Capt., A.U.S.  
Vander Laan, C. A., Iowa City.....A.U.S.  
Voelker, C. A., Jr., Iowa City.....Capt., A.U.S.  
Weatherly, H. E., Iowa City.....Major, A.U.S.  
Wollmann, W. W., Iowa City (Martinsburg,  
W. Va.) .....Capt., A.U.S.  
Ziffren, S. E., Iowa City (APO 879, New York,  
N. Y.) .....Capt., A.U.S.

## Junior Members

†Adams, M. P., Iowa City (Fleet PO, San Francisco,  
Cal.) .....Lt. (jg), U.S.N.R.  
Ahrens, J. H., Iowa City (APO San Francisco, Cal.)...A.U.S.  
Ball, A. L., Iowa City (Camp Polk, La.).....Major, A.U.S.  
Barrent, M. E., Iowa City (Camp Tyson, Tenn.)...Capt., A.U.S.  
Blair, J. D., Iowa City (APO San Francisco, Cal.)...Major, A.U.S.  
Boyd, R. J., Iowa City (Spokane, Wash.).....Capt., A.U.S.  
Brinnall, E. S., Iowa City (APO New York, N. Y.)...Major, A.U.S.  
Burr, S. P., Iowa City (APO San Francisco, Cal.)...1st Lt., A.U.S.  
Carney, R. G., Iowa City (Fleet PO, San Francisco,  
Cal.) .....Lt., U.S.N.R.

Connole, J. F., Iowa City (Camp Bowie, Texas)...1st Lt., A.U.S.  
 Couch, O. A., Iowa City (Camp Vsn Dorn, Miss.)...1st Lt., A.U.S.  
 Coulson, F. H., Iowa City (APO New York, N. Y.)...Capt., A.U.S.  
 Freiberg, M., Iowa City (Jefferson Barracks, Mo.)...A.U.S.  
 Hamilton, H. E., Iowa City (Chicago, Ill.)...1st Lt., A.U.S.  
 Harms, G. E., Iowa City (Carlisle Barracks, Penn.)...1st Lt., A.U.S.  
 Hendricks, A. B., Iowa City (Fleet PO, San Francisco, Cal.)...Lt. Comdr., U.S.N.  
 Hovis, Wm., Iowa City (Fleet PO, San Francisco, Cal.)...Lt. (jg), U.S.N.R.  
 Kaplan, Nathan, Iowa City (Carlisle Barracks, Pa.)...1st Lt., A.U.S.  
 Keil, P. G., Iowa City (Sioux City, Iowa)...1st Lt., A.U.S.  
 Keleher, M. F., Iowa City (Great Lakes, Ill.)...Lt. (jg), U.S.N.R.  
 McCann, J. P., Iowa City (Carlisle Barracks, Penn.)...1st Lt., A.U.S.  
 McQuiston, W. O., Iowa City (APO San Francisco, Cal.)...Capt., A.U.S.  
 Moen, B. H., Iowa City (APO 755, New York, N. Y.)...Capt., A.U.S.  
 Moon, R. E., Iowa City (APO New York, N. Y.)...1st Lt., A.U.S.  
 Odell, Lester, Iowa City (Pensacola, Fla.)...Lt. (jg), U.S.N.R.  
 Phillips, R. M., Iowa City (San Francisco, Cal.)...1st Lt., A.U.S.  
 Randall, R. G., Iowa City (Waterloo, Iowa)...Capt., A.U.S.  
 Rosenbusch, M., Iowa City (Fort Leonard Wood, Mo.)...1st Lt., A.U.S.  
 Russin, L. A., Iowa City (Fort Blanding, Fla.)...Capt., A.U.S.  
 Sawtelle, W. W., Iowa City...Lt., U.S.N.R.  
 Shand, J. A., Iowa City (Carlisle Barracks, Penn.)...1st Lt., A.U.S.  
 Shapiro, S. I., Iowa City...Lt. Comdr., U.S.N.R.  
 Skewis, J. E., Iowa City (Corona, Cal.)...Lt. Comdr., U.S.N.R.  
 Skouge, O. T., Iowa City...Lt. Comdr., U.S.N.R.  
 Watters, V. G., Iowa City (Fort Leonard Wood, Mo.)...1st Lt., A.U.S.  
 Wicks, W. J., Iowa City (Camp Crowder, Mo.)...Capt., A.U.S.  
 Williams, L. A., Iowa City (Treasure Island, Cal.)...1st Lt., A.U.S.  
 Willumsen, H. C., Iowa City (Denver, Colo.)...Capt., A.U.S.  
 Yetter, W. L., Iowa City (APO New York, N. Y.)...Major, A.U.S.  
 Zahrt, N. E., Iowa City (Keesler Field, Miss.)...Capt., A.U.S.  
 Zimmerman, H. A., Iowa City (Santa Ana, Cal.)...1st Lt., A.U.S.

#### Keokuk County

Engelmann, A. T., What Cheer (Camp Polk, La.)...Capt., A.U.S.

#### Kossuth County

Corbin, R. L., Luverne (Des Moines, Iowa)...Capt., A.U.S.  
 Kenefick, J. N., Algona (Fleet PO, San Francisco, Cal.)...Comdr., U.S.N.R.

#### Lee County

Younan, Thomas, Ft. Madison...Capt., A.U.S.

#### Linn County

Chapman, R. M., Cedar Rapids (Chicago, Ill.)...Major, A.U.S.  
 Coughlan, V. H., Coggon (Fort Snelling, Minn.)...A.U.S.  
 Leedham, C. L., Springfield (Hot Springs, Ark.)...Col., A.U.S.  
 †MacDougal, R. F., Cedar Rapids (APO 9057, New York, N. Y.)...Capt., A.U.S.  
 Noble, W. C., Cedar Rapids (Camp San Luis Obispo, Cal.)...1st Lt., A.U.S.  
 Noe, C. A., Cedar Rapids (Hot Springs, Ark.)...Major, A.U.S.  
 Smrha, J. A., Cedar Rapids (Denver, Colo.)...Capt., A.U.S.  
 Yavorsky, W. D., Cedar Rapids (Fleet PO, San Francisco, Cal.)...Comdr., U.S.N.

#### Louisa County

De Yarman, K. T., Morning Sun (APO 74, San Francisco, Cal.)...Capt., A.U.S.  
 Tandy, R. W., Morning Sun (Oakland, Cal.)...Comdr., U.S.N.R.

#### Lyon County

Cook, S. H., Rock Rapids (Camp Chaffee, Ark.)...Major, A.U.S.  
 Moriarity, F. J., Rock Rapids (Corvallis, Ore.)...Capt., A.U.S.

#### Mahaska County

Bos, H. C., Oskaloosa...Major, A.U.S.  
 Gillett, R. M., Oskaloosa (Fleet PO, San Francisco, Cal.)...Capt. U.S.N.

#### Marion County

Gray, J. F., Jr., Melcher (Hattiesburg, Miss.)...Capt., A.U.S.  
 Schiek, C. M., Knoxville...Lt. Comdr., U.S.N.R.

#### Mills County

Kuitert, J. H., Glenwood (Denver, Colo.)...Major, A.U.S.

#### Mitchell County

Owen, W. E., Osage (San Diego, Cal.)...Lt., U.S.N.

#### Monona County

†Harlan, M. E., Onawa (Fleet PO, San Francisco, Cal.)...Lt. (jg), U.S.N.R.

#### Monroe County

Bay, F. N., Albion...Lt. Comdr., U.S.N.R.  
 Gilliland, C. H., Albion (Fleet PO, San Francisco, Cal.)...Lt. Comdr., U.S.N.

#### Montgomery County

Panzer, E. J. C., Stanton (Point Montara, Cal.)...Lt., U.S.N.R.

#### Muscatine County

Kimball, J. E., Jr., West Liberty...Major, A.U.S.  
 Norem, Walter, Muscatine (APO, Miami, Fla.)...Capt., A.U.S.

#### O'Brien County

Getty, E. B., Primghar (APO 872, New York, N. Y.)...Major, A.U.S.

#### Page County

Bauer, Frank, Shenandoah (APO New York, N. Y.)...A.U.S.  
 Brush, Frederick, Shenandoah (APO New York, N. Y.)...A.U.S.  
 Burdick, F. D., Shenandoah (Denver, Colo.)...Major, A.U.S.  
 Burnett, F. K., Clarinda (Cheyenne, Wyo.)...Major, A.U.S.  
 Rausch, G. R., Clarinda (Sioux City, Iowa)...Capt., A.U.S.  
 Schwidde, Tilford, Shenandoah (APO New York, N. Y.)...A.U.S.

#### Pocahontas County

Blair, F. L., Jr., Fonda...Lt., U.S.N.R.  
 Larson, J. B., Laurens (APO 720, San Francisco, Cal.)...Capt., A.U.S.  
 Patterson, A. W., Fonda (Des Moines, Iowa)...Capt., A.U.S.

#### Polk County

Barner, J. L., Des Moines (Atlanta, Ga.)...Major, A.U.S.  
 Bender, H. R., Des Moines (Carlisle Barracks, Penn.)...1st Lt., A.U.S.  
 Bruner, J. M., Des Moines (El Paso, Texas)...Lt. Col., A.U.S.  
 Bruns, P. D., Des Moines (Carlisle Barracks, Penn.)...1st Lt., A.U.S.  
 Downing, A. H., Des Moines (Springfield, Mo.)...Capt., A.U.S.  
 Ervin, L. J., Des Moines...Lt. Col., A.U.S.  
 Fleck, W. L., Des Moines (Ft. Howard, Md.)...Lt. Col., A.U.S.  
 Fried, David, Des Moines (Carlisle Barracks, Penn.)...1st Lt., A.U.S.  
 Fracasse, John, Des Moines...1st Lt., A.U.S.  
 Gerchek, E. W., Des Moines...Lt. Col., A.U.S.  
 Harris, H. L., Des Moines (Salina, Kan.)...1st Lt., A.U.S.  
 Kirch, W. A. W., Des Moines (Astoria, Ore.)...Lt. Comdr., U.S.N.R.  
 Landis, S. N., Des Moines (West Palm Beach, Fla.)...1st Lt., A.U.S.  
 La Tona, Salvatore, Des Moines...1st Lt., A.U.S.  
 Lederman, James, Des Moines...1st Lt., R.C.A.  
 Losh, C. W., Jr., Des Moines...Capt., A.U.S.  
 Maloney, P. J., Des Moines (Fort Lewis, Wash.)...1st Lt., A.U.S.  
 Martin, L. E., Des Moines (Helena, Ark.)...1st Lt., A.U.S.  
 Matheson, J. H., Des Moines (Fleet PO, San Francisco, Cal.)...Lt. Comdr., U.S.N.R.  
 McDonald, D. J., Des Moines...Major, A.U.S.  
 Mencher, E. W., Des Moines...1st Lt., A.U.S.  
 Montgomery, S. A., Des Moines (Carlisle Barracks, Pa.)...Capt., A.U.S.  
 †Morden, R. P., Des Moines (APO 635, New York, N. Y.)...Capt., A.U.S.  
 Mumma, C. S., Des Moines (Los Angeles, Cal.)...Major, A.U.S.  
 Nourse, M. H., Des Moines (Fleet PO, New York, N. Y.)...Lt., U.S.N.  
 Overton, L. M., Des Moines (Fleet PO, San Francisco, Cal.)...Lt. Comdr., U.S.N.R.  
 Patton, B. W., Des Moines (Camp Robinson, Ark.)...1st Lt., A.U.S.  
 Schlaser, V. L., Des Moines (Fleet PO, New York, N. Y.)...Lt. Comdr., U.S.N.  
 Singer, P. L., Des Moines (Camp Grant, Ill.)...1st Lt., A.U.S.  
 Skultety, J. A., Des Moines (Fleet PO, San Francisco, Cal.)...P. A. Surg., U.S.P.H.S.  
 \*Snodgrass, R. W., Des Moines (APO 9528, New York, N. Y.)...Capt., A.U.S.  
 Sorensen, R. M., Des Moines (Topeka, Kan.)...Lt. Col., U.S.P.H.S.  
 Stitt, P. L., Des Moines (Seattle, Wash.)...Lt. (jg), U.S.N.R.  
 Updegraff, Thomas, Des Moines (APO San Francisco, Cal.)...Capt., A.U.S.  
 Van Hale, L. A., Des Moines (Denver, Colo.)...Major, A.U.S.  
 Wagner, E. C., Des Moines (APO 1009, San Francisco, Cal.)...Capt., A.U.S.

#### Pottawattamie County

Kurth, C. J., Council Bluffs (Camp Crowder, Mo.)...Major, A.U.S.  
 Mathiasen, J. W., Council Bluffs (APO 239, San Francisco, Cal.)...Capt., A.U.S.  
 Wurl, O. A., Council Bluffs (Ft. Sam Houston, Texas)...Lt. Col., A.U.S.

#### Sac County

Bassett, G. H., Sac City (Mobile, Ala.)...Comdr., U.S.N.R.

#### Scott County

†Baker, R. W., Davenport (APO 511, New York, N. Y.)...Capt., A.U.S.  
 Boyer, U. S., Davenport (Rock Island, Ill.)...Lt. Col., A.U.S.  
 Carey, E. T., Davenport...1st Lt., A.U.S.  
 Coleman, Tom, Davenport (APO 230, New York, N. Y.)...Capt., A.U.S.  
 Cummins, G. M., Jr., Davenport (Fort Custer, Mich.)...Capt., A.U.S.  
 Evans, H. J., Davenport (Daytona Beach, Fla.)...Capt., A.U.S.  
 Hurteau, Everett, Davenport (APO 647, New York, N. Y.)...Capt., A.U.S.  
 Hurteau, W. W., Davenport (Camp Berkeley, Texas)...Major, A.U.S.  
 Krakauer, Max, Davenport (APO 102, New York, N. Y.)...Major, A.U.S.  
 Kuhl, A. B., Jr., Davenport (Ft. Meade, Md.)...1st Lt., A.U.S.  
 Perkins, R. M., Davenport (APO 121B, New York, N. Y.)...Capt., A.U.S.



Rendleman, Hugh, Davenport (Fleet PO, San Francisco, Cal.).....Lt. (jg), U.S.N.R.  
 Sheeler, I. H., Davenport (APO 350, New York, N. Y.) .....Capt., A.U.S.

#### Shelby County

McGowan, J. P., Harlan (La Jolla, Cal.).....Comdr., U.S.N.R.

#### Sioux County

Gleysteen, R. R., Alton (Palo Alto, Cal.).....Comdr., U.S.N.  
 Oelrich, C. D., Sioux Center (Buckley Field, Colo.)..Capt., A.U.S.

#### Wapello County

Brentan, Emanuel, Ottumwa (Camp Carson, Colo.)..Capt., A.U.S.  
 Howell, H. P., Ottumwa (San Rafael, Cal.).....Major, A.U.S.  
 Selman, R. J., Ottumwa (El Paso, Texas).....Col., A.U.S.  
 Struble, G. C., Ottumwa (Cleveland, Ohio).....Lt. Col., A.U.S.

#### Warren County

Hoffman, G. R., Lacona (Camp San Louis Obispo, Cal.) .....Capt., A.U.S.

#### Washington County

Boice, C. L., Washington (Oakland, Cal.)....Lt. Comdr., U.S.N.  
 Droz, A. K., Washington.....Comdr., U.S.N.R.  
 Stutsman, R. E., Washington (Patuxent River, Md.) .....Lt., U.S.N.R.

#### Webster County

Burleson, M. W., Fort Dodge (Pasadena, Cal.).....Capt., A.U.S.  
 Joyner, N. M., Fort Dodge (Columbus, Ohio).....A.U.S.  
 †Thatcher, O. D., Fort Dodge (APO 634, New York, N. Y.) .....Capt., A.U.S.

#### Woodbury County

Cowan, J. A., Sioux City (Oklahoma City, Okla.) .....Major, U.S.P.H.S.  
 Crowder, R. E., Sioux City (Kansas City, Mo.) .....Lt. Comdr., U.S.N.R.  
 Dimsdale, L. J., Sioux City.....Capt., A.U.S.  
 Heffernan, C. E., Sioux City (APO 336, San Francisco, Cal.) .....Capt., A.U.S.  
 Knott, P. D., Sioux City.....Capt., A.U.S.  
 Simonsen, Marie N., Sioux City (Philadelphia, Pa.)..Lt., U.S.N.R.

#### Wright County

Doles, E. A., Clarion (Spokane, Wash.).....Capt., A.U.S.

(\*) Reported missing in action.

(†) Reported deceased in service.

(‡) Reported prisoner of war.

### ANNUAL MEETING OF IOWA AND ILLINOIS CENTRAL DISTRICT MEDICAL ASSOCIATION

The annual meeting of the Iowa and Illinois Central District Medical Association will be held Thursday, May 9, in the Inn at Blackhawk Watch Tower State Park in Rock Island, Illinois.

The meeting will open at 4:00 p. m. with a talk on Some Newer Aspects of Sterility by Melvin R. Cohen, M.D., of Chicago. At five o'clock Abram E. Bennett, M.D., of Omaha will speak on Common Medical and Surgical Errors in Psychosomatic Syndromes. Dinner is scheduled for 6:30 p. m., and at eight o'clock Newell C. Gilbert, M.D., of Chicago will discuss The Importance of Remediable Aspects of Heart Disease.

### JACKSON CLINIC POSTGRADUATE MEETING

The next Jackson Clinic Postgraduate Meeting will be held Thursday and Friday, May 16 and 17, at the Jackson Clinic in Madison, Wisconsin.

Any physician who is interested may attend, and veterans returning from service will have an opportunity at this meeting to get a refresher course in civilian practice. Every effort has been made to present a program based on clinical work that may be used in everyday practice. For further information or reservations, write the program chairman, Russell Jackson, M.D., 16 South Henry Street, Madison 3, Wisconsin.

### STUDY OF CHILD HEALTH SERVICES

(Continued from page 209)

needs of children of the United States and the facilities available to meet these needs.

The organization work of this study has now been completed and over twenty states have approved through their medical societies plans for beginning the study. On April 17, 1946, Dr. Lee F. Hill of Des Moines, president-elect of the American Academy, addressed the House of Delegates of the Iowa State Medical Society concerning our participation in the study. A motion was unanimously adopted to support the American Academy of Pediatrics in this first effort of an organized group of medical men to inquire into its own affairs.

Many organizations *outside* the ranks of practicing physicians are quoting figures and making recommendations relative to the regulation of medical practice. This study offers the practicing physician opportunity to determine the needs of his own state and to have the facts to help him determine the best methods to meet these needs.

Dr. James E. Dyson of Des Moines is the state chairman of the Academy members in Iowa and will "head up" the organization of the study for this state. The importance of the study cannot be overemphasized and this is an opportunity for the physicians themselves to demonstrate an interest in the broader aspects of medical practice instead of sitting idly by and being regulated by outsiders.

Hence, as a practicing physician in the state you will be asked shortly to do your part in this study by giving conscientiously your share of pertinent information. You will be asked to answer two fundamental questions on the basis of your personal medical experience and of your knowledge of the status of child health facilities in the community in which you practice.

1. To what degree do you, as a physician, carry the load of the medical care of young patients in your community?

2. Have the health facilities in your community met your medical requirements in carrying out the medical care you wish to give your young patients?

Two questionnaires bearing on these two questions will reach you within a short time. Please think about these questions in order that you may give the information which you consider most vital in this particular study. The success of this study in each state depends wholly upon the cooperation of every physician in the state.

# WOMAN'S AUXILIARY NEWS

MRS. KEITH M. CHAPLER, *Chairman of Press and Publicity Committee*, Dexter, Iowa

*President*—MRS. MARION H. BRINKER, Jefferson

*President-Elect*—MRS. FRED MOORE, Des Moines

*Secretary*—MRS. CHARLES A. NICOLL, Panora

*Treasurer*—MRS. HENRY G. DECKER, Des Moines

## BUTLER COUNTY AUXILIARY

The Woman's Auxiliary to the Butler County Medical Society held a business meeting in Dr. McWhirter's office in Allison March 10. Mrs. Fred Rolfs, president, conducted the business meeting. Reports from all standing committees were given, and the following officers were elected: Mrs. F. A. Rolfs of Aplington, president; Mrs. H. G. McLeod of Greene, vice president, and Mrs. F. F. McKean of Allison, secretary and treasurer.

Mrs. C. F. Roder of Dumont gave a book review of "Burma Surgeon."

## DALLAS-GUTHRIE AUXILIARY

Following a luncheon with the doctors at the Presbyterian Church in Panora, the Dallas-Guthrie Medical Auxiliary met in the Library Thursday, April 11. Mrs. E. T. Butterfield, president, conducted the meeting. Routine committee reports were presented. Mrs. K. M. Chapler reported that she had collected \$30.00 from Auxiliary members for the Cancer Control Fund.

Mrs. C. E. Porter, program chairman, introduced the speaker, Miss Marjorie Vincent of Guthrie Center, who spoke of her experiences as a Red Cross recreational director in England and Germany during the war. Miss Mafalda Thornburg, daughter of Dr. and Mrs. W. V. Thornburg of Guthrie Center, explained some of the details of her work as a WAVE. Mrs. Marion Brinker, president-elect of the Iowa State Medical Auxiliary and a former member of the Dallas-Guthrie Auxiliary, was an honored guest.

## LETTER REPRINTED AT SUGGESTION OF MEMBER OF ADVISORY COUNCIL OF THE WOMAN'S AUXILIARY TO THE AMERICAN MEDICAL ASSOCIATION

January 29, 1946

To the Wives of Physicians:

This letter is about the Medical Auxiliary, and why you should be active in that organization. Many women, maybe not you, have been going for a free ride for years while a few have carried the work. This isn't peculiar to the women either. When I was in Detroit at the Secretary's Conference, I heard plenty of the Doctors were free riders, and I'd like to bet that they are the ones who will cry bloody murder the loudest if the private practice of medicine gets plowed under along with the little pigs!

"Things" are changing rapidly in this country. An intelligent appraisal of the statistics in health improvements since 1900, under the private practice of medicine, shows great progress made. However, most doctors will concede that much is yet to be done. There are many families upon whom fees for medical care fall as a great burden. Changes are going to be made and we'll either make them ourselves or have them made for us. For years we have been against this and that in political medicine. But we've never been for anything that was specific, and now suddenly, at the eleventh hour, we are to have our own American Medical Association Plan, for extending medical service. At the Detroit Meeting, Edward J. McCormick, M.D., of Toledo, Ohio, who is a brilliant leader and speaker, touched upon the plan briefly. He promised much and it sounds good. Details will be available in the very near future.

So—what about the Auxiliary—where do we come in? The Medical Auxiliary exists as far as I personally am concerned, solely for public relations. In this case all physicians' wives should know the answers, and be working quietly wherever we go—and most of us get plenty of places. We are *against* the Murray-Wagner-Dingell Bill, and *for* the plan sponsored by the American Medical Association. But, unless you know *why* you're for or against, you're going to look pretty silly.

It is the business of the Auxiliary to educate all physicians' wives so they may talk intelligently for our plan against the M-W-D Bill, and similar legislation. Every woman to whom this letter is being sent has had a pretty comfortable living from the private practice of medicine. I believe every one of you should be willing to give a few hours occasionally to come to an Auxiliary meeting to keep up-to-date on political medicine. We've been having fine programs. At our last meeting, Mrs. Harvie, our State Auxiliary President, gave an excellent talk. We're planning some very instructive meetings for the future, and besides, we have fun. Other doctors' wives aren't so bad when you get to know them. We need you and YOU need the Auxiliary, so won't you please attend meetings?

Sincerely yours,

Mrs. R. Bruce Macduff, President  
Genesee County Medical Auxiliary  
Michigan

From the March 1946 issue of the Bulletin of the Woman's Auxiliary to the American Medical Association.



## MEDICAL INSURANCE PLAN GROWING FAST

Iowa Medical Service, the doctors' own sickness insurance plan, is still very, very young. The first contract went into effect only last October.

But it is growing fast. A couple months ago there were 5,000 insured persons or families; now there are 8,000.

It is growing at just about the rate that the Blue Cross hospital insurance plans did at the corresponding stage of their development. And Blue Cross insurance covered 20 million Americans by the end of 1945, and is still growing rapidly.

The Iowa Medical Service plan supplements Blue Cross. Blue Cross pays hospital bills; Iowa Medical Service pays doctors' bills in connection with hospitalization, or surgical and obstetrical doctor bills anywhere. They can be bought in one package, and usually are. So far, they are sold only to groups, but the groups may be as small as 10 under certain conditions.

The chief difference between these insurance plans and commercial plans is that the hospitals run Blue Cross and the doctors run Iowa Medical Service—and they guarantee service. Instead of paying cash benefits which may or may not cover the bills, they pay the bills (in the case of low-income families).

Both commercial and non-commercial types are approved by the American Medical Association, and do not fall within its ban on "socialized medicine"—though the Blue Cross and Iowa Medical Service are of real *social value* in spreading the cost of catastrophic illnesses over a series of small payments in advance, on the insurance principle.

Editorial from the "Des Moines Register," April 15, 1946.

## MAJOR DEATH CAUSES

Major causes of death in 1945 were the following, in the order indicated, according to the American Public Health Association:

1. Heart disease
2. Cancer and other malignant tumors
3. Intracranial lesions of vascular origin
4. Nephritis
5. Pneumonia
6. Accidents other than from motor-vehicles
7. Tuberculosis

"G. E. X-Ray Corporation Victor News," February, 1946.

## CANCER MUCH DEADLIER THAN BULLETS DURING WAR YEARS

"Between Pearl Harbor and V-J Day cancer killed more than twice as many Americans than did the Germans and the Japs," Dr. Frank E. Adair, president of the American Cancer Society, declared at the society's annual dinner here for the National Association of Science Writers. "Unless we do something about it, 17,000,000 Americans now living will die of cancer. It is exceeded only by heart disease as a cause of death," he said. "Because it frequently means not only death but long and cruel suffering, it is the disease we dread most."

The nation spent \$2,000,000,000 (two billion dol-

lars) on wartime research on the atomic bomb. The cancer society hopes the American public will contribute from \$3,000,000 to \$5,000,000 during 1946 for research for the war on cancer.

The National Research Council, chief adviser of the government on the organization of wartime research, is now acting in the same capacity to advise the cancer society on cancer war research. It has already recruited 90 of the nation's leading scientists to lay the battle plans and hopes to enlist in the fight men now being released from the armed forces, it was announced at the dinner meeting here. Funds for fellowships for such workers will be provided.

The scope of the new attack on cancer can be seen from the subjects planned for study under a score of research panels. These include genetics, chemistry and biology of cells, the milk factor, viruses, botany, nutrition, enzymes, proteins, the endocrine glands, the blood and blood forming organs, physics, radiology and radioactive tracer substances.

"G. E. X-Ray Corporation Victor News," February, 1946.

## GOD BLESS THE ROUTINE PEOPLE

God bless the routine people of the world:  
The meek ones who inherit from the earth  
What no one really wants, yet with their portion  
Purchase from life the limit of its worth.  
Those who play secret parts in the public play—  
Drawers of curtains, shifters of the scene,  
All money-raisers in all noble causes,  
All human bolts in every big machine.  
Chairmen of programs, scrubbers of public floors  
By night that some may know the dawn's clear tread,  
Sellers of poppies down the day-long street,  
The cleaner-uppers when the crowd has fled.  
All water carriers at football games,  
Embroiderers of flour sacks for church bazaars.  
All brothers of a brother, and eyes that glow  
For having helped another reach the stars.  
The checkers-in and checkers-out of tickets,  
The also-rans, the all who had no place,  
And every sub-subchairman of subcommittees.  
God bless them all, for by their unsung grace,  
High moments poise upon a tip of time,  
And over their sure tracks great wheels run free;  
Without whose patient power each shaft of glory  
Flooding our eyes might never, never be!

—Isabelle Bryans Longfellow

"Good Housekeeping," February, 1946.

## SPEAKERS BUREAU RADIO SCHEDULE

WOI—Wednesdays at 2:45 P. M.

WSUI—Thursdays at 9:30 A. M.

May 1- 2 The Virtues of a Vacation

Charles L. Worley, M.D.

May 8- 9 Prenatal Care John R. Rankin, M.D.

May 15-16 Diabetes Don L. Scheller, M.D.

May 22-23 Hay Fever Paul J. Amlie, M.D.

May 29-30 Vitamins in the Diet

William L. Randall, M.D.

# HISTORY OF MEDICINE IN IOWA

*Edited by the Historical Committee*

DR. WALTER L. BIERRING, Des Moines, Chairman

DR. HENRY G. LANGWORTHY, Dubuque, *Secretary* DR. CHARLES L. JONES, Gilmore City

DR. CLYDE A. HENRY, Farson

DR. LESTER C. KERN, Waverly

## Frank Manly Fuller, M.D. 1868-1946

### AN APPRECIATION

The many friends of Dr. Frank Fuller were saddened by his death on March 19, 1946, at Keokuk, Iowa. He had been in failing health for several years as the result of chronic coronary disease, myocardial failure, and visceral congestion.

Dr. Fuller came of a long line of physicians. The earliest direct ancestor on record is Dr. Jeremy A. Fuller who practiced in New England in 1740, followed by his son Noah in 1775 and grandson Robert in 1797 in Milford, Massachusetts. Dr. Frank Fuller's grandfather, Dr. James Fuller, was graduated in 1820 from Dartmouth Medical College and practiced in Cincinnati, Ohio. His father, Dr. Euclid E. Fuller, was graduated in 1862 from the Keokuk College of Physicians and Surgeons, and practiced all his life in Keokuk. Dr. Frank M. Fuller was graduated in 1897 from the Keokuk Medical College and his son, Dr. John Davis Fuller—the sixth member of this distinguished lineage—received the degree of Doctor of Medicine in 1928 from the State University of Iowa, and is now a District Health Director, State Board of Health, Santa Cruz, California.

Dr. Fuller was born in Keokuk, September 29, 1868, and received his collegiate education at Parsons College, A. N. 1888, A. M. 1891, and was graduated in 1897 from the Keokuk Medical College, following which he spent a year in postgraduate studies in London and Vienna. During the following forty-five years he was an active general practitioner with special interest in internal medicine and obstetrics. It can well be said that he represented the finest type of "family doctor."

Throughout his entire medical career he was interested in society organization. He served as secretary and president of the Lee County Medical Society, and was honored with the presidency of the Iowa State Medical Society in 1926, presiding during the Diamond Jubilee session.

He always maintained an active interest in medical education and the promotion of higher stand-

ards for medical practice. He was a member of the Faculty of Keokuk Medical College until its merger with Drake University in 1907. In 1925 he was appointed a member of the Iowa State Board of Medical Examiners and served until 1943, one of the longest terms of continuous service on record. As a representative of the Iowa Board he attended the annual sessions of the Federation of State Medical Boards of the United States, where his talents were recognized in the election to membership on the executive committee and as president in 1943-44.

As a member of the Historical Committee, he contributed a number of most interesting articles on pioneer Iowa medicine, particularly as concerned with the early history of medical education and journalism in Keokuk. Among his rare treasures is the first volume of the Iowa Medical and Chirurgical Journal published in Keokuk in September 1850.

Dr. Fuller was an officer in the alumni association of the graduates of the two medical schools of Keokuk and promoted frequent reunions which must have been very interesting to the members. He was a fellow of the American Medical Association, fellow of the American College of Physicians, and diplomate of the American Board of Internal Medicine (Founders Group).

He is survived by his wife and three sons, Frank Lapsley, Madison B., and Dr. John Davis Fuller. Through these columns the members of the Iowa State Medical Society convey herewith their expressions of sincere condolence.

Frank Fuller was a leader in Iowa medicine, devoted to its highest ideals; we will miss the charm of his fellowship and the good cheer he cast all along Life's pathway.

WALTER L. BIERRING, M.D.

*Editor's Note: As the Journal was going to press we received the sad news that Mrs. Fuller died of heart disease on April 15.*



# Medical History of Wapello County

CLYDE A. HENRY, M.D., Farson

## PART V

### PRESENT MEMBERSHIP OF WAPELLO COUNTY MEDICAL SOCIETY

(Continued from March)

*Dr. Harold H. Moore* was born in Martinsburg, Iowa, April 4, 1890, the son of Calvin and Mary Ann (Wilson) Moore. His father came from Ohio and his mother, an Irish orphan girl, came to this country at the age of seven. Dr. Moore was the youngest of a family of three boys, and the protege of his oldest brother, Dr. Martin F. Moore, whose untimely death occurred in Ottumwa, December 27, 1919. He received his preliminary education in the Martinsburg and Oskaloosa schools, and was graduated in June, 1912, with the degree of M.D. from the University of Illinois Medical School. He interned at Augustana Hospital in Chicago, where he studied three years. After a few years at Washington, Iowa, he moved to Ottumwa and has since remained in continuous practice, specializing in general surgery. He is a member of the Wapello County, Iowa State, and Des Moines Valley Medical Societies, and the American Medical Association. He was admitted to membership in the American College of Surgeons in 1932, and is an active member of the staffs of the St. Joseph and Ottumwa Hospitals.

Dr. H. H. Moore married Miss Vera G. Oldham on May 16, 1925. They have no children.

*Dr. Siegmund Frank Singer* was born in Vienna, Austria, on March 5, 1893, the son of Julius Singer, M.D., and Marie-Anne (Heider) Singer. He received his early education in the elementary school, and the gymnasium (middle school) in Vienna, Austria. He studied medicine at the Imperial University of Vienna, from which he received his medical degree July 13, 1917. Internship and residencies: Allgemeines Krankenhaus (General Hospital) in Vienna. He took postgraduate work in radiology under Professor G. Holtz-Knecht. From 1921 to 1930 he was instructor and director in the X-ray department of the second internal University Clinic under Professor Ortner, and from 1930 to 1938 he was director of the X-ray department of the Viennese Industrial Health Insurance Company. He is a member of the Austrian Roentgenological Society, the Viennese X-ray Society, the Wapello County and Iowa State Medical Societies and the American Medical Association, a Diplomat of the American Board of Radiology, a member

of the College of Radiology, and the Radiological Society of North America. He succeeded the late Dr. H. H. Webb as roentgenologist at the St. Joseph and Ottumwa Hospitals, and Sunnyslope Sanatorium. He married Margaret Kornfeldt November 8, 1936. They have no children.

*Dr. Lawrence Atwater Taylor* was born July 25, 1897, in Indianapolis, Indiana, the son of Dr. Charles B. Taylor and Mabel (Atwater) Taylor. After graduation his father moved his family to Gibson, Iowa, and later to What Cheer, Iowa, where young Taylor completed his early education, graduating from the What Cheer High School in 1915. He attended Grinnell College, Grinnell, Iowa, from 1915 to 1917, when his premedical course was interrupted by World War I. He enlisted in the U. S. Army in May, 1917, and served until February, 1919. He resumed his premedical course at the State University of Iowa at the close of the war, and entered the Iowa State Medical School in 1920, from which he graduated in 1924 with the B.S. and M.D. degrees. He served his internship in OALR under Professor Lee Wallace Dean at the State University of Iowa. He entered practice in Ottumwa in 1925, being associated with his father in OALR until his father's retirement in 1935, since which time he has continued in practice in Ottumwa, specializing in eye, ear, nose and throat work. He is a member of the state and national medical associations and the Iowa Academy of Medical Sciences. He is a member of the staffs of the Ottumwa hospitals, a past president and active member of the Wapello County Medical Society, serving continuously as its secretary since 1940.

He married Anna Marie Naylor on December 22, 1920, and has one son twenty years of age, who is a premedical student at the University of Oregon.

Besides his parents, Dr. and Mrs. Charles B. Taylor of Upland, California, he has two brothers: Richard, also of California, and Dr. E. Merle Taylor, an eye specialist practicing in Portland, Oregon.

*Dr. Maude Taylor* was born on a farm near Montezuma, Iowa, January 29, 1880, the daughter of H. M. and Mary (Blakely) Taylor, the latter a native of Illinois. Her father's father, Dr. H. M. Taylor, graduated from the Cincinnati

Medical College about 1850, locating shortly thereafter in Montezuma. He became one of the leading pioneer physicians of that section of the state, and was also very active in the social and political affairs of his community, having served as treasurer of Poweshiek County, president of the school board, and was the first Master of the Masonic lodge in Montezuma.

Dr. Maude Taylor received her early education in the rural schools, graduating from the Montezuma High School in 1898. She taught school two years, then entered the Iowa State University in 1900, from which she received the B.S. degree in 1904 and the M.S. and M.D. degrees in 1906. She located in Ottumwa in the fall of 1906 and has been in continuous practice since that time. She is a member of the county, state, and national medical associations, and the Des Moines Valley Medical Society. She is a past president of the staffs of the St. Joseph and Ottumwa Hospitals and the Wapello County Medical Society. During her college days she was honored by being elected to membership in Sigma Xi. She has never married.

*Dr. Thomas Leonard Vineyard* was born in Rock Mills, Alabama, January 28, 1886, the son of I. W. and Tommie (Hardy) Vineyard, successful farmers. He received his early education in the public schools at Rock Mills. After graduating from the Roanoke High School, he attended Bowdon College, Bowdon, Georgia, two years, and received his M.D. degree from the Atlanta School of Medicine in 1908. After receiving his medical degree, he engaged in the practice of medicine for a short time at Rock Mills and Simpson, Georgia. In 1910-11 he took postgraduate work in pediatrics at a medical school in Mobile, Alabama, after which he returned to his practice at Simpson. In 1923 he moved to La Grange, Georgia, where he established a successful practice in general medicine and surgery. During his residency at La Grange he attended regularly the refresher courses at Emory University and the clinics at the Grady Hospital in Atlanta. In 1929 he enrolled for a special course in Proctology, and in 1933 moved to Dow City, Iowa, where he remained in practice until 1940 when he moved to his present location in Ottumwa, limiting his practice to proctology. He is a member of the Wapello County and Iowa State Medical Societies, the American Medical Association and the National Proctologic Association, of which he became a fellow member in 1944. He is married and has one child.

*Dr. Harry Warren Vinson* was born March 2, 1876, in Aurora, Indiana, the son of John and

Mary (Bruce) Vinson. With his family he moved to Iowa in May of the same year and received his early education in the grade schools of Ottumwa. After graduating from the Ottumwa High School, he read medicine and attended the State University of Iowa Medical School from 1898 to 1900. He then attended Rush Medical College, from which institution he received the M.D. degree June 18, 1902. Returning to Ottumwa, he continued his studies in the office of Dr. D. C. Brockman for two summers, practiced one year in Ottumwa, then two years at Millersburg in Iowa County, returning to his home town in 1908, where he has since been successfully engaged in the practice of medicine and surgery. He is a member of the Wapello County and Iowa State Medical Societies, the American Medical Association, and a life member of the American College of Surgeons. He is a past president and an active member of the staffs of the Ottumwa and St. Joseph Hospitals, as well as a past president of the Wapello County and the Des Moines Valley Medical Societies. He specializes in obstetrics and general practice. He was a member of the Draft Board in World War I, and served continuously as chief examining physician of Draft Board No. 1 in World War II. He married Clare E. Scully, daughter of John C. and Mary (Harsch) Scully in 1903. His wife died in 1933. He has one daughter, Mrs. Gwendolyn Weidemann, and two grandchildren, who reside in Wilmette, Illinois. Dr. Vinson is a Methodist, a Mason, and a Woodman, and his hobbies are music and taking color moving pictures.

*Dr. John Edward Traister* was born June 29, 1877, in Givin, Iowa, where he received his early education. He later studied medicine, graduating from the Keokuk Medical College, Keokuk, Iowa, May 8, 1906. He then located in Eddyville, Iowa, where he has since enjoyed an extensive rural practice. He is a member of the Wapello County, Iowa State, and Des Moines Valley Medical Societies, and the American Medical Association. He married Ethel Bickford May 11, 1915. They have no children.

*Dr. Eppie S. McCrea* was born August 8, 1867, the daughter of James L. and Mary Jane Wylie of Eddyville, Iowa. She attended rural schools in early childhood, and was graduated in 1886 from the Eddyville High School. She read medicine in the office of Dr. Francis Marion McCrea, whom she married in 1895, and was graduated in 1904 from the Barnes Medical College, St. Louis, Missouri. She returned to her home in Eddyville to become the office partner of her husband in the practice of medicine and surgery for more



than a third of a century. She is a member of the State Society of Iowa Medical Women, the Des Moines Valley Medical Society, and a life member of the Wapello County and Iowa State Medical Societies. She was a successful physician and took an active part in medical affairs until her retirement in 1940, following a cerebral hemorrhage.

The State Society of Iowa Medical Women was organized in 1898, to become the first association of its kind in the United States. In 1923 the annual convention was held in Ottumwa. Dr. Eppie McCrea was president that year and delivered an able address on "Efficiency in Medicine." A splendid history of this worthy organization was prepared and published in two parts: Part One, by Dr. Jeannette Dean-Throckmorton, who was president of the Society in 1919, appeared in the JOURNAL OF THE IOWA STATE MEDICAL SOCIETY in December, 1935. Part Two, by Dr. Eppie McCrea, was published in the following issue.

Dr. Eppie McCrea resides in Eddyville, Iowa. She has no children.

Dr. Kenneth E. Lister was born August 6, 1914, at Lineville, Iowa, the son of Rev. W. Frank Lister, D.D., now living in Boone, Iowa, and

Maude F. Lister. He graduated from the Greenfield High School, Greenfield, Iowa, in 1931, and was a student at Simpson College, Indianola, from 1931 to 1934, at which time he entered the State University of Iowa College of Medicine, receiving therefrom the M.D. degree in 1938. After one year rotating internship at Iowa Methodist Hospital, Des Moines, he engaged in practice with Dr. A. L. Yocom of Chariton. He entered the U. S. Army Medical Corps in April, 1941, and served with the induction station eighteen months. He was then assigned to surgical service and was commanding officer at the station hospital until June, 1944, when he was transferred to the 122nd General Hospital, becoming Chief of General Surgery. After thirteen months' service in Europe, he was placed on terminal leave in October 1945. He recently established his home in Ottumwa, and became a member of the Wapello County Medical Society. He was appointed resident in surgery at the Minneapolis General Hospital (connected with the University of Minnesota Postgraduate School) effective January 1, 1946, for a period of three years. In addition to membership in the Wapello County Medical Society, he is a member of the Iowa State Medical Society and the American Medical Association. He has a wife, Eileen G. Lister, and one son, David E.

#### THE DISTRIBUTION OF WAPELLO COUNTY PHYSICIANS

(EDITOR'S NOTE: *A continuation of the section which was erroneously inserted in the February issue.*)

One hundred and sixty-three of the 265 men and women who have practiced medicine in Wapello County were residents only of Ottumwa. Included in this group are some of the best known names in local medical history. But for lack of space, it would have been a pleasure, indeed, to have included in our group of biographic sketches such men as Dr. D. E. Graham, Dr. B. D. La Force, and many others. Following is the list of Ottumwa physicians:

Alt, A. T.	Bonham, J. C.
Anthony, Walter E.	Bonnell, F. S.
Baker, Lewis J.	Bovenmyer, DeVoe O.
Baker, N. A.	Bowles, Fred W.
Bannister, Murdoch	Box, John C.
Barker, — —	Boyer, Howard
Barton, Edwin G.	Brentan, Emanuel
Belmont, C.	Brockman, D. C.
Betts, Wm. Henry	Brody, Sidney
Bishop, Carl Gregg	Bryan, E. M.
Blauw, William	Carpenter, Seymour D.
Blome, Arthur L.	Carter, James
Blome, Glenn C.	Coffin, V. C.

Conroy, Hugh Harrison	Hoeven, Edward B.
Crider, J. Jackson	Holloway, J. G.
Cunningham, — —	Holmgren, Knut David
Denoon, J. W.	Howell, Elias Burton
Detwiler, D. W.	Huband, Charles
Douglass, Thomas J.	Edward
Downs, Vernon Sawyer	Hubbard, D. L.
Edgerly, Edward Tyler	Hueval, "Old Dutch
Elerick, John Wesley	Doctor"
Elson, Veryl J.	Hughes, Robert Owen
Fair, Adam Bert	Hull, James Apperson
Foster, G. F.	Jackman, Charles
Fuller, William	Bernard
Gilcrest, R. S.	Johnson, Glenn
Gould, Isaac Lawrence	Raymond
Graham, Dell Ewig	Keating, D. J.
Hackleman, — —	King, Stephen Jones
Hammer, L. A.	Koontz, J.
Hansell, Wm.	LaForce, Burdette D.
Hansell, Wm.	LaForce, Wm. Brooks
Whitfield	Lambert, Elmer John
Hauck, Samuel L.	Lathrop, E. L.
Hawkins, A.	Lawler, Charles F.
Hecker, Friedrich	Lendgren, C. V.
Alexander	Leonard, B. B.
Herrick, John Francis	Lewis, Charles B.
Herrick, Wm. Joseph	Lewis, Charles G.

(Continued on page 230)

# THE JOURNAL BOOK SHELF

## BOOKS RECEIVED

- PERSONALITY FACTORS IN COUNSELING**—By Charles A. Curran, Ph.D., St. Charles College, Columbus, Ohio; Preface by MICHAEL J. READY, Bishop of Columbus; Introduction by CARL R. ROGERS, Professor of Psychology, University of Chicago. Grune & Stratton, New York, 1945. Price, \$4.00.
- THE CARE OF THE AGED (Geriatrics)**—By Malford W. Thewlis, M.D., Attending Specialist, General Medicine, United States Public Health Hospitals, New York City; Attending Physician, South County Hospital, Wakefield, R. I.; Director, Thewlis Clinic; Special Consultant, Rhode Island Department of Public Health. Fifth edition, thoroughly revised. The C. V. Mosby Company, St. Louis, 1946. Price, \$8.00.
- MODERN MANAGEMENT IN CLINICAL MEDICINE**—By F. Kenneth Albrecht, M.D., S.A. Surgeon, U. S. Public Health Service; Kansas State Tuberculosis Consultant; Formerly Clinical Director, U. S. Marine Hospital, Baltimore, Md. The Williams & Wilkins Company, Baltimore, 1946.
- GASTRO-ENTEROLOGY**—By Henry L. Bockus, M.D., Professor of Gastro-enterology, University of Pennsylvania Graduate School of Medicine. In three volumes; Volume III—"The Liver, Biliary Tract and Pancreas, and Secondary Gastro-intestinal Disorders." W. B. Saunders Company, Philadelphia, 1946. Price, 3 Volumes and separate desk index, \$35.00.
- HOWELL'S TEXTBOOK OF PHYSIOLOGY**—Edited by John F. Fulton, M.D., Sterling Professor of Physiology, Yale University School of Medicine. Fifteenth edition. W. B. Saunders Company, Philadelphia, 1946. Price, \$8.00.
- THE 1945 YEAR BOOK OF PEDIATRICS**—Edited by Isaac A. Abt, M.D., Professor of Pediatrics, Northwestern University Medical School. With the Collaboration of ARTHUR F. Abt, Comdr., M.C., U.S.N.R., Associate Professor of Pediatrics, Northwestern University Medical School. The Year Book Publishers, Chicago, 1946. Price, \$3.00.
- THE 1945 YEAR BOOK OF GENERAL SURGERY**—Edited by Evarts A. Graham, M.D., Professor of Surgery, Washington University School of Medicine, Surgeon-in-Chief of the Barnes Hospital and of the Children's Hospital, St. Louis. The Year Book Publishers, Chicago, 1946. Price, \$3.00.
- SYNOPSIS OF PHYSIOLOGY**—By Rolland J. Main, Ph.D., Professor of Physiology, Medical College of Virginia, Richmond. The C. V. Mosby Company, St. Louis, 1946. Price, \$3.50.
- AMBULATORY PROCTOLOGY**—By Alfred J. Cantor, M.D., Associate Proctologist, Kew Gardens Hospital, Long Island, New York. With a foreword by BEAUMONT S. CORNELL, M.D., Editor, American Journal of Digestive Diseases. Paul B. Hoeber, Inc., New York, 1946. Price \$8.00.

## BOOK REVIEWS

### THE 1945 YEAR BOOK OF PHYSICAL MEDICINE

Edited by Richard Kovacs, M.D., Professor of Physical Medicine, New York Polytechnic Medical School and Hospital; Attending Physical Therapist, Manhattan State, Harlem Valley State, Columbus and West Side Hospitals; Visiting Physical Therapist, New York City Department of Correctional Hospitals. The Year Book Publishers, Chicago, 1946. Price, \$3.00.

Under the capable editorship of Dr. Kovacs, this volume again presents the advances made in physical therapeutic methods and applied physical therapy. It is interesting to note the advancements which have been made through work carried on in the armed services.

Convenient arrangement of the various methods of therapy and their use in special conditions makes this volume an extremely valuable addition to the library of all physicians.

E. M. G.

A typical chapter is the one on ectopic pregnancy. The etiology and patient's history are first considered. A diaphragmatic sketch illustrates variations responsible for different types of findings. A discussion of the physical signs, symptoms and laboratory aids follows. The chapter concludes with several paragraphs on diagnosis and differential diagnosis.

The chapter on acute appendicitis is especially good. It contains twenty-eight pages supplemented by eight illustrations. The differential diagnosis, so important when operation is contemplated, is very complete and instructive.

The volume is written in clear, concise style which makes its reading easy and pleasurable to anyone interested in the diagnosis of surgical diseases of the abdomen. It was written more for men covering the fields of both medicine and surgery; however, it affords anyone practicing medicine a quick, concise reference to the diagnosis of any surgical abdominal condition with which he may be confronted. This review of surgical diagnosis I can recommend heartily to all interested in the subject.

J. B. P.

### SYNOPSIS OF THE DIAGNOSIS OF THE SURGICAL DISEASES OF THE ABDOMEN

By John A. Hardy, M.D., El Paso, Texas. Second edition. The C. V. Mosby Company, St. Louis, 1945. Price, \$5.00.

The second edition of this pocket size book comprises 528 pages with 100 illustrations. Each of its seventy-one chapters covers one intra-abdominal surgical condition. The most common conditions as well as the more rare are included.

### A TEXTBOOK OF NEURO-ANATOMY

By Albert Kuntz, M.D., Professor of Micro-Anatomy in St. Louis University School of Medicine. Fourth edition, thoroughly revised. Lea & Febiger, Philadelphia, 1945. Price, \$6.50.

From the clear and concise manner in which the subject is presented, it can be seen that the author is fully aware of the difficulties which the beginner



encounters in his study of neuro-anatomy. Most students complain that they are unable to correlate structure and function of the nervous system, but in this text the material is so arranged that early in the course the student gets an adequate concept of this important phase of neuro-anatomy.

The neurol mechanisms dealing with the vital processes are explained in a very comprehensive manner. The simple reflex and correlation mechanisms of the spinal cord and brain stem are described completely but without too much detail before the long conductive pathways are discussed. Again the functional aspects of the pathways are reviewed so that the student can appreciate the relation of structure and function. The diencephalon—cerebral cortex—and corpus structure are described not only from their phylogenetic development but also from their anatomic and structural relationship. The chapter discussing the autonomic nervous system is especially well written, particularly from a functional standpoint. The outline for laboratory exercises is so arranged that it can be used either in its entirety or in part.

This text should help clarify a subject which is usually rather difficult for beginning students, and they should be helped especially by the concise summaries which conclude each chapter.

W. E. A.

#### VD MANUAL FOR TEACHERS

By Samuel D. Allison, M.D., Director of Bureau of Venereal Diseases, Board of Health, Territory of Hawaii, and JUNE JOHNSON, B.S., M.S., School Health Education Administrator, Board of Health, Territory of Hawaii; in collaboration with W. TATE ROBINSON, Director of Health Education, Department of Public Instruction, Territory of Hawaii, and ELMER J. ANDERSON, Acting Director, Public Health Education, Board of Health, Territory of Hawaii. Emerson Books, Inc., New York, 1946. Price, \$2.00.

This manual is intended as an aid for building the program of venereal disease education in secondary schools. In this it succeeds very well. The entire problem is presented well and in a clear and concise manner. It gives an outline of what is being done, what can be done, and how to do it. There is a short summary of the five venereal diseases which is in a language the lay person can understand readily, with adequate emphasis on the late effects of the diseases and how these diseases may be controlled. There is a good reference list at the end of the chapter.

The teaching outline and listing of the physical aids that are available are particularly good for any physician who may be called upon to present an educational lecture on this subject to a lay

group. This manual can be recommended to anyone who finds it necessary to give a lecture or to conduct an educational program in this field. It is to be recommended particularly to the busy physician who may be asked to speak on venereal disease in a school or before any other group, for it has all the necessary information.

E. A. F.

#### THE 1945 YEAR BOOK OF OBSTETRICS AND GYNECOLOGY

Edited by J. P. Greenhill, M.D., Professor of Gynecology, Cook County Graduate School of Medicine; Chairman, Department of Gynecology, Cook County Hospital; Attending Obstetrician and Gynecologist, Michael Reese Hospital; Associate Staff, Chicago Lying-In Hospital. The Year Book Publishers, Chicago, 1946. Price, \$3.00.

The Year Book of Obstetrics and Gynecology gives a general review of the literature on these subjects during the past year. The articles selected are representative of the latest thought in both fields of medicine. Because of his vast experience, the comments of the editor are especially valuable. A number of articles are illustrated and the volume is well indexed.

This text is well worth while for any busy practitioner who wishes to keep up to date in his profession.

A. D. J.

#### PRINCIPLES OF DYNAMIC PSYCHIATRY

By Jules H. Masserman, M.D., Division of Psychiatry, Department of Medicine, University of Chicago. W. B. Saunders Company, Philadelphia, 1946. Price, \$4.00.

Here is a book which discusses psychiatry from a new angle, that of the forces which cause the maladjustment rather than the usual nosologic description of the resultant mental condition. It should appeal to the man who is looking for help in understanding the dynamisms of phobias, obsessions, compulsions, anxieties, and other neurotic manifestations, since much more space is given to them than to the forces productive of psychoses.

The bibliography is complete enough for intensive study of the psychology and psychiatry mentioned in the text. The glossary of psychiatric terms will furnish a ready reference to words of obscure meaning and facilitate the use of the book by beginning students.

This book will be enthusiastically received by psychiatrists who desire to get away from the fatalistic standpoint of older descriptive psychiatry with its overemphasis on heredity.

J. I. M.

## SOCIETY PROCEEDINGS

### Black Hawk County

The regular meeting of the Black Hawk County Medical Society was held in Waterloo at Black's Tea Room Tuesday, April 16, at 6:30 p. m. The guest speakers of the evening were Adolph L. Sahs, M.D., and Albert P. McKee, M.D., of the State University of Iowa College of Medicine. The topic of their discussion was The Diagnosis and Treatment of Poliomyelitis.

C. A. Waterbury, Jr., M.D., Secretary

### Boone-Story Society

The Boone-Story Medical Society met in Boone at the Lincoln Tavern Tuesday evening, March 26, with approximately forty physicians in attendance. Douglas N. Gibson, M.D., of Des Moines addressed the group on Fractures.

### Cerro Gordo County

The Cerro Gordo County Medical Society held its regular meeting Tuesday evening, April 9, with a large number of guests present at the dinner. An interesting paper was presented by Stephen F. Nagyfy, M.D., of the Department of Obstetrics and Gynecology, State University of Iowa College of Medicine, on the subject Psychosomatic Aspects of Obstetric and Gynecologic Practice. Lee R. Woodward, M.D., of Mason City spoke on the Veterans Administration and the part the doctors will have to play in classifying, diagnosing, and treating veterans.

D. L. Long, M.D., Secretary

### Greene County

A joint meeting of the Greene County Dental and Medical Societies was held at Greene County Hospital in Jefferson Thursday, April 11, at 7:30 p. m. The scientific program consisted of a talk on Dentistry in the Navy by Dr. E. G. Baker; the showing of slides on The Manufacture of Penicillin by Dr. O. E. Hoffman; and an address on Cause and Prevention of Dental Caries by Dr. S. G. Barker.

J. R. Black, M.D., Secretary

### Iowa County

At a meeting of the Iowa County Medical Society, held in Marengo Wednesday evening, March 20, the members voted to close their offices each Thursday afternoon and evening. Leon H. Flancher, M.D., of the State Department of Health was guest speaker. He discussed the film program of the State Department of Health and Iowa Tuberculosis Association which has been used in Iowa for the detection of tuberculosis, using films to illustrate his remarks.

### Jackson County

The Jackson County Medical Society met in Maquoketa Tuesday evening, March 26, and elected the following officers to serve the Society during the ensuing year: Dr. Earl V. Andrew of Maquoketa, president; Dr. Owen L. Frank of Maquoketa, vice president; Dr. John J. Tilton of Bellevue, secretary and treasurer; and Dr. Frederick J. Swift, Sr., of Maquoketa, delegate.

### Johnson County

The regular monthly meeting of the Johnson County Medical Society was held in Iowa City at Hotel Jefferson Wednesday, April 3, at 6:00 p. m. The scientific program consisted of a paper on Recent Advances in Concepts of Shock by Eunice M. Christensen, M.D., of the Department of Anesthesia. The discussion was opened by Stuart C. Cullen, M.D., head of the Department of Anesthesia.

R. H. Flocks, M.D., Secretary

### Mitchell County

The regular monthly meeting of the Mitchell County Medical Society was held in Osage at Kelly's Coffee Shop Monday evening, April 8, with all members present except those temporarily out of the county. Following dinner a business session was held and a paper presented by one of the Society members; there was a short discussion regarding the new county hospital which is to be erected as soon as materials are obtainable; and Frederic T. Stearns, M.D., a 1942 graduate of the State University of Iowa College of Medicine, was admitted to membership.

R. L. Whitley, M.D., Secretary

### Scott County

The Scott County Medical Society held its regular monthly meeting in Davenport at the Lend-A-Hand Club Tuesday evening, April 2. The guest speaker of the evening was Philip C. Jeans, M.D., Professor of Pediatrics at the State University of Iowa College of Medicine, who spoke on Nutritional Research and Its Practical Application.

J. H. Sunderbruch, M.D., Secretary

### Tama County

The Tama County Medical Society honored one of its members, Dr. Arthur A. Pace of Toledo, upon his completion of fifty years of active medical practice in Tama County. The dinner meeting was held in Toledo in the American Legion Club Rooms Thursday evening, April 4, at 6:30 p. m. The guest speaker of the evening was T. Frank Hersch, M.D., of Cedar Rapids, who spoke on Healthful Hobbies.



### Winneshiek County

Thirty-two physicians were present at a joint medical meeting of the Allamakee, Howard, Fayette and Winneshiek County Medical Societies held in Decorah at the Winneshiek Hotel Thursday evening, March 21. Following the 6:30 dinner the guest speaker, Raymond D. Pruitt, M.D., of the Mayo Clinic in Rochester, gave an enlightening and interesting talk on The Various Aspects of Coronary Heart Disease. Those present entered freely into the question and answer period with the result that there was an excellent discussion of the lecture.

H. H. Ennis, M.D., Secretary

### PERSONAL MENTION

The JOURNAL is pleased to announce the release of the following physicians from active military duty:

**Dr. Harry A. Amesbury** has resumed his medical practice in Clinton after more than three years of active duty in the Army Medical Corps. Dr. Amesbury, a Major at the time of his release, spent the greater part of his service on foreign duty.

**Dr. Donald W. Bickley** has returned to Waterloo and has resumed his medical practice following three years of service in the Army Medical Corps. Dr. Bickley held the rank of Captain at the time of his release.

**Dr. Nathan Blackman**, who was Clinical Director of Clarinda State Hospital prior to entering military service, has recently been discharged from the Army Medical Corps after four years of active duty and has been appointed Chief, Mental Hygiene Clinic, Veterans Administration, in St. Louis, Missouri. Dr. Blackman, a Major, received a citation for meritorious service in January, 1945, and was serving at Fort Benjamin Harrison at the time of his release.

**Dr. Thomas A. Bond** has been released to inactive duty in the Medical Corps of the Navy after more than three years of service and has resumed his medical practice in Des Moines in the Equitable Building. Dr. Bond held the rank of Lieutenant Commander at the time he was placed on inactive status.

**Dr. Paul F. Chesnut** has recently received his discharge from the Army Medical Corps and at present is serving as a resident at Broadlawns General Hospital in Des Moines before resuming his medical practice in Winterset. Dr. Chesnut, a Captain, served the major portion of his military service on foreign duty.

**Dr. John R. Connell** of Des Moines has received his discharge from the Army Medical Corps after almost five years of active duty. Dr. Connell, a Major at the time of his release, has been appointed Chief Resident at Children's Hospital in Denver.

**Dr. Henry H. Corn**, who practiced in Des Moines prior to entering military service, has now received

his discharge from the Army Medical Corps and on April 1 began a two year course in pediatrics at St. Louis University School of Medicine in St. Louis, Missouri. Dr. Corn held the rank of Captain at the time of his release.

**Dr. Albert W. Diddle**, who was associated with the University Hospitals in Iowa City prior to his entry into military service, has now been placed on inactive status in the Medical Corps of the Navy. Dr. Diddle, a Lieutenant Commander, has transferred his Society membership to Texas.

**Dr. Marcus B. Emmons** has received his discharge from the Army Medical Corps after more than three years of active duty and has transferred his Society membership to Texas. Dr. Emmons, a Captain at the time of his release, was associated with the University Hospitals in Iowa City before reporting for active duty.

**Dr. Robert H. Foss**, who was located in Remsen prior to entering military service, has received his discharge from the Army Medical Corps after more than three years of active duty and has established an office in Clinton in the Howes Building. Dr. Foss held the rank of Captain at the time of his release.

**Dr. Preston E. Gibson** has resumed his pediatric practice in Davenport, with offices in the Union Bank Building, following his release from the Army Medical Corps. Dr. Gibson was on active duty forty-four months and held the rank of Lieutenant Colonel at the time of his release.

**Dr. Clarence D. N. Gilfillan** has received his discharge from the Army Medical Corps and has resumed his medical practice in Eldon after more than three years of military service. Dr. Gilfillan held the rank of Captain at the time of his release.

**Dr. Daniel A. Glomset** has returned to Des Moines following his release from the Army Medical Corps and has become associated in the practice of medicine with his father, Dr. Daniel J. Glomset. He was on active duty more than three years, part of which time was spent in England, and held the rank of Captain at the time of his release.

**Dr. Russell R. Hansen** has resumed his practice in Storm Lake following his release from active duty in the Medical Corps of the Navy. Dr. Hansen held the rank of Lieutenant at the time he was placed on inactive status.

**Dr. Lucien W. Ide** of Creston has received his discharge from the Army Medical Corps and is now at the University Hospitals in Iowa City where he has a residency in medicine. Dr. Ide held the rank of Major at the time of his release.

**Dr. Thomas J. Irish** has reopened his office in For-

est City following his release from active duty in the Medical Corps of the Navy. Dr. Irish held the rank of Commander at the time he was placed on inactive status.

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Dr. Ralph L. Irwin has returned to Iowa City where he is associated with the University Hospitals following his release from active duty with the Medical Corps of the Navy. Dr. Irwin was in service more than three years and held the rank of Captain at the time he was placed on inactive status.

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Dr. W. Hawley Kerr has returned to Hamburg to resume his medical practice after more than three years of active duty in the Army Medical Corps. Dr. Kerr, a Captain, recently returned from the Pacific Theater of Operations.

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Dr. Earl L. Keyser has received his discharge from the Army Medical Corps after two and a half years of active duty and has become associated with his father, Dr. Ralph E. Keyser, in the general practice of medicine and surgery. He held the rank of Captain at the time of his release.

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Dr. Albert H. Knoll of Dubuque has received his release from the Army Medical Corps after more than four years of active military duty. He held the rank of Major at the time he received his discharge.

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Dr. Raleigh H. Lage, who was associated with the University Hospitals in Iowa City prior to entering military service, has now been placed on inactive status in the Navy Medical Corps. Dr. Lage, a Lieutenant, was on active duty more than three years.

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Dr. Harold J. McCoy has now been placed on inactive status in the Medical Corps of the Navy and has reopened his office in the Bankers Trust Building in Des Moines, limiting his practice to diseases of the eye, ear, nose and throat. Dr. McCoy was in service more than four years and held the rank of Captain at the time of his release.

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Dr. Melvin J. McVay has resumed his practice in Lake City after having received his discharge from the Army Medical Corps. Dr. McVay held the rank of Captain at the time of his release.

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Dr. Arnold M. Nelson has just returned to Des Moines following his release from military service and plans to resume his medical practice in the near future. Dr. Nelson, a Major in the Army Medical Corps, was on active duty more than three years.

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Dr. Paul F. Olson has resumed his practice in Dubuque with the Medical Associates following his release from active duty in the Medical Corps of the Navy. Dr. Olson, a Lieutenant Commander, spent fifty-five months in the service, part of which was in the South Pacific.

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Dr. Millard T. Petersen has resumed his practice in Atlantic after serving three and a half years with the Army Medical Corps. Dr. Petersen, a Captain, recently returned from the Pacific Theater.

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Dr. Arthur C. Richmond has received his release from active duty in the Navy Medical Corps and plans to resume his practice in Fort Madison in the near future. Dr. Richmond held the rank of Commander at the time he was placed on inactive status.

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Dr. Glenn S. Rost, who practiced in Red Oak prior to entering the Army Medical Corps, has now received his discharge and has established an office in Halstead, Kansas, for the general practice of medicine. Dr. Rost held the rank of Captain at the time of his release.

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Dr. Lester W. Savage, who practiced in Shenandoah before entering military service in August 1941, has established an office in Earling for the general practice of medicine and surgery following his release from active duty in the Army Medical Corps.

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Dr. Theodore Scharle has received his discharge from the Army Medical Corps after more than four years of active service and has resumed his medical practice in Dubuque. Dr. Scharle held the rank of Captain at the time of his release.

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Dr. Mellgren C. Schroeder of Pella has received his discharge after more than three years of active duty in the Army Medical Corps. Dr. Schroeder held the rank of Captain at the time of his release.

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Dr. Rupard G. Smith of Cedar Falls has received his discharge from the Army Medical Corps and at present has a residency at the University of Michigan Medical School. Dr. Smith was on active duty more than four years, the greater part of which was spent in foreign service, and at the time of his release held the rank of Major.

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Dr. Elmer M. Sorensen has reopened his office in Red Oak following his release from active duty with the Army Medical Corps. Dr. Sorensen, a Captain, was in service more than three years.

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Dr. Joe M. Standefer, who practiced in Tama prior to entering military service, has now been placed on inactive status and is serving a pediatric residency at Blank Memorial Hospital in Des Moines. Dr. Standefer was on active duty more than three years and at the time of his release held the rank of Lieutenant in the Navy Medical Corps.

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Dr. Emerson J. Steenrod has resumed his practice in Iowa Falls following his release from active duty in the Navy Medical Corps. Dr. Steenrod, a Lieutenant Commander, spent twenty-eight months in military service, twenty of which were sea duty.



**Dr. Robert L. Stephens**, who was associated with the University Hospitals in Iowa City prior to entering military service, has now received his discharge from the Army Medical Corps and has transferred his Society membership to Florida. Dr. Stephens held the rank of Captain at the time of his release.

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**Dr. Joseph J. Straub** has received his discharge from the Army Medical Corps and plans to resume his medical practice in Dubuque. Dr. Straub was on active duty three years and at the time of his release held the rank of Captain.

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**Dr. Howard V. Turner** has received his discharge from the Army Medical Corps after more than three years of active duty and has resumed his association with The Retreat in Des Moines. Dr. Turner held the rank of Captain at the time of his release.

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**Dr. Charles V. Waggoner** has resumed his practice in Clinton following his release from active duty with the Navy Medical Corps. Dr. Waggoner was in service more than three years and held the rank of Lieutenant Commander at the time he was placed on inactive status.

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**Dr. Thomas G. Walker** has been placed on inactive status in the Navy Medical Corps and at present is taking a three month postgraduate course at the University of Minnesota Medical School prior to resuming his practice in Riceville. Dr. Walker held the rank of Lieutenant Commander at the time of his release from active duty.

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**Dr. Edward R. Woodward** of Mason City has been released from active duty in the Medical Corps of the Navy after more than three years of active service. Dr. Woodward held the rank of Lieutenant at the time he was placed on inactive status.

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**Dr. Merlin R. Wyatt**, who practiced in Manning prior to entering military service, has now received his discharge and has located in Dallas, Texas. Dr. Wyatt served with the Army Medical Corps three years and held the rank of Captain at the time of his release.

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**Dr. Lewis L. Zager** has assumed his duties at the University Hospitals in Iowa City after having received his discharge from the Army Medical Corps. Dr. Zager, a Captain, was in service more than three years and just recently returned from service in the European Theater of Operations.

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The following physicians, who were previously reported released from active military duty, have submitted these changes:

**Dr. Eugene J. Maire**, formerly of Vail, has completed his studies at the Center for Continuation Study of the University of Minnesota and has now located in Humphrey, Nebraska.

**Dr. Oscar H. Miller**, who practiced in Estherville before entering military service, is now located in Cincinnati, Ohio.

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**Dr. Louis J. Noun** of Des Moines limits his practice to allergy instead of dermatology as stated in the April issue of the JOURNAL.

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**Dr. A. Bryce Stearns**, formerly of Des Moines, is Chief of the Division of Anesthesiology at Henry Ford Hospital in Detroit, Michigan. It was reported in the April issue that Dr. Stearns had a residency at Henry Ford Hospital.

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**Dr. Frederick J. Swift, Jr.**, who established an office in Maquoketa upon his release from the Army Medical Corps, has accepted a year's residency in surgery at Henry Ford Hospital in Detroit, Michigan. He plans to return to Maquoketa upon termination of the residency.

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**Dr. Max T. Wainwright**, who practiced in Mapleton before joining the Army Medical Corps, has now established an office in the Nasser Building in Sioux City for the general practice of medicine.

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**Dr. Pierre Sartor** of Titonka recently observed the fiftieth anniversary of his medical practice. He located in Bancroft when he first came to Iowa and later moved to Titonka, where he has spent the last twenty-eight years.

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**Dr. Edwin J. Butterfield** of Dallas Center has announced his retirement from the active practice of medicine after forty-three years of continuous service. Dr. William A. Castles of Rippey, recently released from the Army Medical Corps, will take over Dr. Butterfield's practice.

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**Dr. John W. Cavanaugh**, who has been practicing in Fort Dodge, is now located in Topeka, Kansas, where he is a surgeon at the Winter General Hospital.

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**Dr. Theodore J. Greteman**, formerly of the University Hospitals and Charles City, is now located in Van Nuys, California, where he is associated with the Birmingham General Hospital.

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**Dr. John Hess, Jr.**, has become associated with Dr. Noble W. Irving of Des Moines in the general practice of medicine. Dr. Hess was graduated in 1941 from the State University of Iowa College of Medicine and was recently released from military service.

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**Dr. C. W. Clark** of Centerville, Kansas, has become associated with Dr. Percy E. Stuart of Nashua in the general practice of medicine.

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**Dr. Herbert F. R. Plass**, recently released from the Army Medical Corps, has located in Waterloo where he will be associated with Drs. James R. Thompson

and Edward L. Rohlf in the Waterloo Building. Dr. Plass will specialize in internal medicine and cardiology. He was graduated in 1939 from Harvard Medical School.

**Dr. Frederic G. Loomis** of Waterloo has announced his return from military service and entrance into practice in association with **Drs. Waterbury and Waterbury** in the Black Building. Dr. Loomis was graduated in 1940 from the State University of Iowa College of Medicine.

**Dr. Glenn D. Cunningham** has announced the opening of his office in Davenport in the Union Bank Building where he will specialize in diseases of the eye, ear, nose and throat. Dr. Cunningham was graduated in 1939 from the St. Louis University School of Medicine and was recently released from the Army Medical Corps after sixty-four months of active service.

#### DEATH NOTICES

**Arnold, Thomas**, of Primghar, aged sixty-six, died March 31 from injuries sustained in an automobile accident. He was graduated in 1908 from Keokuk Medical College, College of Physicians and Surgeons, and at the time of his death was a member of the O'Brien County and Iowa State Medical Societies.

**Fuller, Frank Manly**, of Keokuk, aged seventy-eight, died March 19 following an illness of several years resulting from heart disease. He was graduated in 1897 from Keokuk Medical College, and at the time of his death was a life member of the Lee County and Iowa State Medical Societies. A more complete obituary will be found in the History of Medicine section of this issue.

**Gray, Howard Devir**, of Des Moines, aged seventy, died March 21 of a heart ailment. He was graduated in 1900 from the State University of Iowa College of Medicine, and at the time of his death was a member of the Polk County and Iowa State Medical Societies.

**Hart, William Edward**, of Odebolt, aged seventy-six, died April 8 following an illness of several years. He was graduated in 1903 from the University of Illinois College of Medicine, and at the time of his death was a life member of the Sac County and Iowa State Medical Societies.

**McGrath, William Joseph**, of Elkader, aged seventy-five, died suddenly April 7 of a heart attack. He was graduated in 1895 from Rush Medical College, and at the time of his death was a member of the Clayton County and Iowa State Medical Societies.

**Morrison, Orry Charles**, of Carroll, aged sixty-two, died April 2 of a respiratory ailment resulting from heart disease. He was graduated in 1910 from the State University of Iowa College of Medicine, and at

the time of his death was a member of the Carroll County and Iowa State Medical Societies.

#### MEDICAL HISTORY OF WAPELLO COUNTY

(Continued from page 223)

Lewis, David Hampton	Shelton, Cass
Lockwood, J.	Slaught, A. W.
Mahon, Edward	Sleeper, Lawrence
McCormick, J. E.	Edward
McCreary, S. M.	Small, Wm. B.
McKechie, N.	Smith, Melville B.
Means, M. G.	Smythe, S.
Mills, Frank Wilbur	Spilman, Harold
Mills, Margaret B.	Augustus
Minn, H. R.	Spilman, Smith
Mitchell, S. R.	Augustus
Moore, Gage Clarence	Stark, Alice M.
Moore, Harold H.	Stevens, Harry Lester
Moore, Martin F.	Stewart, Dudley W.
Morgan, Wm. D.	Stoker, Wm. B.
Morse, L. C.	Strickler, B.
Mummert, A. J.	Struble, Gilbert Carl
Nash, Edwin Alexander	Tait, Thomas Elliott
Nelson, Frederick	Tanner, W. E.
Lawrence	Taylor, Charles B.
Nelson, Frederick	Taylor, F. W.
Lawrence, Jr.	Taylor, James L.
Newell, Floyd Wilmoth	Taylor, Lawrence
Nichols, J. W.	Atwater
Norris, S. S.	Taylor, Maude
Oden, R. J. E.	Thrall, Seneca Brown
Olson, W. E.	Trueblood, Wm. Alfred
O'Neil, S. E.	Vance, W. W.
Orr, Wm. L.	Vineyard, Thomas
Pascoe, Marcus Willet	Leonard
Peterson, Albert H.	Vinson, Harry W.
Peterson, Emma H. S.	Walker, Evon
Philpott, C. H.	Warden, C. C.
Pope, Geo. Chester	Watson, H. J.
Powell, C. D.	Webb, Harold Homer
Powell, F. S.	Wellstead, Leroy
Prewitt, Leland Howard	Whitehouse, Wm.
Pruce, Arthur Marcel	Nelson
Pumphrey, Geo. E.	Whitaker, I. B.
Rater, David Leo	Wilkinson, John E.
Reed, —	Williamson, Jefferson
Roberts, H. W.	Wilson, H. P.
Roberts, Justus Bulkley	Wilson, John Buchanan
Roberts, Wm. Clyde	Wolfe, Wilson Channing
Rockey, A. E.	Wood, A. D.
Rogers, T. A.	Worley, Charles Lester
Russell, C. R.	Worth, Craig
Sellers, Harry W.	Wright, George
Sheafe, Edward	
Augustus	

(Continued next month)

#### MEDICAL OFFICERS

Please notify the Journal whenever your address changes. This will assure prompt delivery of each issue and will alleviate much of the present confusion in maintaining an accurate mailing list.



# The JOURNAL

of the

## Iowa State Medical Society

VOL. XXXVI

DES MOINES, IOWA, JUNE, 1946

No. 6

### THE RELATION OF RESEARCH TO THE PRACTICE OF MEDICINE

DANIEL J. GLOMSET, M.D., Des Moines

A few years ago I happened to overhear the conversation of a small group of doctors in the cloak room of an Iowa hospital. A physician familiar with the Mayo Clinic made the statement that one of the distinguished members of the Mayo Clinic staff was no good as a clinician, that all he could do was to putter around in a research laboratory and to publish impractical articles in the medical periodicals. This statement led to a comparison of research workers and clinicians. The consensus seemed to be that those who did research were just a degree above the moron. The smartest, the most ideal doctor was the one who had the greatest number of patients in the hospitals, drove the most expensive car, and lived in an attractive house among the elite.

Several days after the cloak room conversation, I happened to be sitting in a lecture room in an out-of-state university hospital, waiting for the opening of a seminar. A few very intelligent looking young assistants had preceded me into the room. One of them was telling the others that a doctor from "the outside" had sent a patient to his department. Of course, the outside "doc" had made a wrong diagnosis and had employed an ineffective treatment. But in the assistant's department the real trouble was soon discovered, and with the proper management the patient was rapidly getting well. This tale was followed by a discussion about medical practice in university hospitals as compared with that carried on in places where there were no medical schools. The opinion seemed to be that only doctors of poorer mentality, who lacked the proper scientific training, were practicing on "the outside" where, consequently, the work done was of poor quality and the treatment given was empiric and often worthless. Scientific medicine was practiced only around medical schools and in large clinics where the

men were "on their toes" and were carrying on investigations of their own. The ideal doctor did not play a medical pianola by applying only what others had developed; he was also actively contributing work of his own to the sum total of medical knowledge.

Of course, both the conversations just related belong to the type of loose talk which one might let enter one ear and go out the other without losing any gem of wisdom. Nevertheless, the conversations disturbed me because I had heard similar views expressed many times among practitioners, and equally often among the more cloistered groups of doctors attached to teaching institutions and clinics. If such ego-inflating exercises are common among the various groups of physicians, they are to be deplored and combated since such attitudes not only hinder growth of the much needed medical solidarity, but also constitute effective road blocks on the way to sane, rapid, medical progress.

One does not need to be a prophet to foresee that the present prospect for a phenomenal advance of medical science is very bright. The rapid intercommunication systems already in operation among the peoples of the world will soon transform all men into one society. The basic sciences on which medicine rests have made stupendous progress from which medicine will obtain effective aids in its future fight against disease. Our medical schools have turned out armies of well-trained doctors capable of carrying medicine forward. However, swift and sane medical advances can be made only when each group of doctors is fully aware and appreciative of the importance of the tasks of other groups and when all collaborate to the fullest extent in medical research. In order to make the greatest possible advance, we who are practicing "on the outside" must not only apply the new, brought forth by others, but we must also do our share of the research which is needed to fill the many gaps in the sciences of disease.

"Research" is a popular word at present and "medical research" falls glibly and often from the lips of many physicians. I wonder how many of us have thought enough about the phrase to realize what it connotes. Allan Gregg gives an illuminating illustration of what research or perhaps re-search actually is.

On his return from China, a friend had lost his wristwatch and had come to Gregg saying that he had searched in vain for it. His cabin boy who had overheard the tale of woe decided to do something about it. The steward called his family of cabin boys together. They went into a huddle and then proceeded to work on the problem with the result that not only the wristwatch was recovered, but also two bracelets, a diamond ring and a stick pin!

However, I suspect that when we hear the phrase "medical research," there comes to our minds something like the following:

We see a thin, nearsighted person at work in a laboratory filled with the odor and noise of experimental animals, with the diluted fumes from many chemicals, with microscopes, test tubes, burettes, and specimen jars—in short, a conglomeration of the kind of apparatus which is found in any well-equipped laboratory. Of course a laboratory is a good place for carrying on investigative work, and the equipment of a well-stocked laboratory contains the tools needed for many types of research. Although such a place may have a high-sounding name, be abundantly endowed, and have persons salaried for carrying on original investigations, it may still be scientifically sterile. Indeed, so often is the output of real research in inverse ratio to the endowment and equipment of an institution that it has been stated the last paper of a research worker is often entitled, "A Description of My New Laboratory." Money, titles, or fancy buildings are not essential for the pursuit of the elusive new knowledge. The Curies worked in a leaky, dirty shed; Pasteur worked in an attic; and Mackenzie worked in the cottages of English common people. The one essential for the discovery of new knowledge is a worker possessed by the Spirit of Research. Whenever and wherever such a person is found, there the tools shall be added unto him, and new truths shall be found.

What manner of person is a research worker? He is neither a superman nor a subman. It is helpful for him to be sturdy so that he will be able to work long hours without injury to his health; yet important research has been accomplished by people in poor health. Laënnec struggled with tuberculosis during his active life, and

John Hunter seemed to be able to catch every contagion to which he was exposed; and, as if that were not enough, he inoculated himself with syphilitic material in order to determine whether syphilis and gonorrhea were one or two diseases. He suffered and died from his experiment. The more native intelligence a research worker possesses, the better he fares. To think clearly and straight is a gift of the gods to men. It is a useful quality for the one "who wishes to follow knowledge like a sinking star beyond the utmost bounds of human thought." Still more useful is the gift of being able to work "in season and out of season," in rain or shine. Such qualities, however, are common to all persons who succeed, be they priests or farmers.

Although the medical investigator needs a thorough education in the medical and allied sciences, even such training seems nonessential. Madame Curie did not have a medical degree, nor did Pasteur, and who is there among physicians who has contributed more to medicine than these two? However, a thorough schooling in the basic sciences, and as much of a mastery of present-day medical knowledge as a mere mortal can assimilate, immeasurably smoothes the path of a medical research worker. Fortunately, all excellent medical schools impart to their students the rudiments of research technic. Would that more of them imparted the spirit of research. At present there are, scattered throughout our land, thousands of young doctors who possess the qualifications just listed, but who are content to do a good job applying what they have learned about the care of the sick and do not seem to be disturbed by the present incompleteness of medical knowledge. They are satisfied to apply automaton-like the knowledge acquired for them by the sweat, blood, and tears of former research workers, and to live happy lives as long as they are financially successful and their friends and acquaintances think them great. Such doctors lack the one trait essential for medical progress—the research spirit.

Spirit is an ancient, honorable word signifying a form of brain activity. To one who lacks the ability to coin polysyllabic words, it is a most difficult word to define. Yet, describe it I must, since it is the Research Spirit which has been responsible for the medical progress in the past, and since it is this same spirit which will determine the rapidity and quality of medical advancement in the future. By spirit I mean that combination of thought, desire, and will which drives a person persistently toward a certain goal. In medicine that goal is new truth about disease and body function. Someone has aptly said that the



basic characteristics of the scientific spirit are a conscious ignorance and an active curiosity. Curiosity is an attribute of normal childhood, but in the average man it seems to atrophy early. In persons possessed by the Spirit of Research the trait persists, grows, and becomes more intense as the years pass. In the individual who has a flair for medicine, the desire to find out about disease and the biologic processes of the body makes him enroll in a medical school. Here a veritable bombardment of the mind commences. One phase after another of the many-faceted medical science is hurled at the student with bewildering rapidity. This machine-gun fire of knowledge makes a tremendous impression on his research anlage. His lively curiosity makes him intensely interested in each subject presented; but before he has a chance to get anything but a smattering of a particular subject, he is rushed on to the next and the next. The result of such bombardment is that, almost overcome by a profound sense of his own ignorance, he wonders why he has been permitted to graduate.

In such a person the Spirit of Research has become such a mastering passion that even if he be graduated with honors he knows himself a dunce. His ignorance seems so abysmal that something must be done about it. Immediately after his graduation Mackenzie bought an encyclopedia of medicine to assuage his thirst for more knowledge. After the searchlight of the potential investigator's mind has been turned on every phase of medicine and a desire has been created for the mastery of each, it by some chance lingers on a particular phase. The craving to master other subjects dims, and the passion to make this one aspect of knowledge his very own grows. He has found his field of endeavor and he must conquer it! The time when such a "call" is received varies in the individual case. It may have been in medical school or many years after graduation. From then on, there is no turning back. He must pursue his problem until it is solved. It is natural that he first "search the scriptures" because others have worked in his field and have recorded observations and opinions which must be considered. By this time he has lost the faith in the infallibility of the "Giants" in medicine which was his at the beginning, for with the coming of age of his Spirit of Research, a third quality, that of a healthy skepticism, has been added to his conscious ignorance and active curiosity. Spoken opinions or printed statements, although they originate from the high and mighty, mean nothing unless based on clear-cut observations. The dominant attitude of the full-grown

Research Spirit has been well expressed by Anton J. Carlson in the query never to be forgotten by his students, "Vat is de evidence?"

The Spirit of Research next moves its possessor into that twilight zone between the known and the unknown where facts are scant and theories abound. Theories are used or discarded according to the amount and kind of evidence which supports them. Sooner or later the searcher comes to the realization that the information sought is not available, that he must find it, regardless of his poor equipment.

He may seek someone more competent than himself to solve his problem. Beaumont implored professors in the East to take over Alexis St. Martin. But professors are usually too busy with more important problems of their own! The researcher is, therefore, forced to do the best he can, and must, like the assembled Chinese cabin boys, go into a huddle with himself, there to sweat and perhaps shed a few tears before a plan is evolved. Then, the skepticism which he mercilessly applied to the work and conclusions of others is applied even more stringently to his own plan. It is critically re-examined and perhaps shown to fellow workers for help and guidance before it is considered sound. Now he is ready to begin his original work. It is at this point that he desperately needs Ehrlich's four G's—Geld, Geduld, Geschick, and Glueck.

Money and a place to work are not easily procured by the neophyte, unless he happens to be attached to a research institution. The Curies made many a genuflexion before they secured enough money to pay for hauling the needed pitchblende to their dirty, leaky shed. MacLeod stated that Banting made such a nuisance of himself begging for a place to work and for experimental animals that he finally let the novice have ten rabbits and a hot attic room to get rid of him. Money is essential and many an investigator has financed his first research out of his own, not overfilled pocket.

"Geschick," dexterity, is often lacking at the outset; the observations or the experiments usually are awkwardly done with clumsy fingers; hence they must be repeated again and again before results can safely be counted. Too frequently the plan leads into a blind alley, and the worker must "stoop, build anew with worn out tools, and never breathe a word about his loss." Finally, a new truth is born to the intense, almost childish joy of the discoverer.

However, the joy is short lived, for if the Research Spirit is pure, skepticism is again unflinchingly applied to the results. The worker knows

that the wishful thinking noted in others may by nature also be his own. He, therefore, reinvestigates, and tackles the problem from other angles to check and recheck the results he has obtained, and frequently, as a last step, his findings are shown to a trusted fellow worker. Fritz Schaudinn sent his material to Novy of Ann Arbor for verification before he dared announce that *Trepnema pallidum* was the cause of syphilis.

When the last vestige of doubt has been banished from the investigator's mind, it is replaced by a desire to tell the new truth to the world. It matters not whether his truth is a trivial laboratory procedure, a new insignificant chemical, or a revolutionary discovery. The world must know! The investigator's desire to publish is every bit as strong as a hen's instinct to cluck after the laying of an egg. Sometimes that desire comes before the observations are finished and takes the form of a preliminary announcement like Harvey's report to the Royal Society in 1616, or that desire may not come until the work is completed. It was three years after the discovery of the tubercle bacillus that Robert Koch's classic paper appeared.

The preparation of material for publication is an onerous task. I have often heard clinicians speak contemptuously of the writing of a scientific paper as if it were the easiest of tasks. No one who has reported original observations and has actually had the manuscript accepted for publication considers the task an easy one. The writers of scientific papers must at all times make almost superhuman efforts at accuracy. Statements must be brief, to the point, and lucidly written. This necessitates rewriting and revising of the manuscript many times. Since few doctors have any special fluency of expression, the task of writing is distasteful. Then, too, every good editor has his own rigid rules which manuscripts must not violate, or acceptance is withheld. If the investigator is unknown and happens to have discovered a fact which is unorthodox, the manuscript has an excellent chance of being rejected unless it conforms in every detail to the editor's standards. Even if it does conform, many an important paper has been thrown into the waste basket by editors who considered themselves competent to separate the wheat from the chaff.

If the investigator is lucky enough to have his efforts accepted for publication, he still has many disappointments and disillusion ahead of him unless he is one of the rare workers who has found a truth avidly awaited by the profession and the world, as was the case with Banting's discovery of insulin and Roentgen's finding of the x-ray.

For the vast majority of investigators the reception which their particular contribution receives is anything but cordial. If the truth reported is unorthodox, the reception is sure to be cold and antagonistic. To the worker's dismay the chill comes from those who should be interested, and the antagonism from the ones he had hoped would enthusiastically support it. Vesalius' own teacher vilified and abused him after he had shown, too clearly perhaps, the fallacies of Galen. The learned members of the Royal Society heard Harvey again and again, but his discovery did not impress the anatomist members enough to make them mention Harvey's work in the treatises they subsequently wrote. The learned chiefs of staff in California would not permit Whipple to try liver on their anemia patients; and the flower of the medical profession of Iowa listened in stony silence to Herrick's monumental talk on the coronary artery in Des Moines in 1911. It has often surprised me to note how much credit for wisdom the owl has received through the centuries by just sitting still.

Sooner or later, sometimes much later, the discovered truth finds its proper place and use in the world of the known, and plaudits small or large accrue to the discoverer. However, by this time, his Spirit of Research has probably driven him "beyond the sunset and the western baths" in search of another "golden fleece," and things done in his honor may be considered just nuisances that rob him of precious time to be used in quest of new facts.

Such is the kind of life a person leads who is possessed by the Spirit of Research. Small wonder that the majority of people, who at all times seem to have been engrossed in a struggle for money and personal glory, consider such a person an ugly duckling. I need not remind the reader what effect the labor of the research men who putter around in the laboratories has had upon society in general and upon our profession in particular. Or do I? Perhaps all would become bigger men and better doctors if time were taken occasionally to contemplate what the toils of the humble research workers have meant through the ages and what they mean today, and will mean tomorrow.

It does not require much thinking to realize that the simplest technical procedure, the most complicated surgical operation, every drug used, and every bit of information about human biology in health and disease which we employ in the practice of medicine have been obtained for us by the labors of research workers who have toiled through the centuries. Were it not for their efforts, our practice would still consist of charms



and incantations. Let research cease and medicine sinks back into the dark ages.

Perhaps such sober contemplation might also activate a desire to add our personal bit to medical knowledge. For the Spirit of Research is not a gift given only to a few in any generation. Every normal child obtains information about its environment through a more or less conscious ignorance and a very active curiosity. Most doctors have developed their research anlage to such an extent that they are very conscious of their ignorance and eager to learn more by the time they graduate. What a pity that so soon after graduation the struggle for existence and the urge to satisfy a demanding ego choke the Research Spirit in the vast majority of doctors. If by some miracle—and it would have to be a great miracle—this spirit continued to grow until it dominated the majority of doctors to such an extent that they would be willing to forsake everything and advance into the unknown in search of the new, the world would be on the threshold of the most stupendous medical advance it has ever known.

The marvelous advances which have taken place in the natural sciences during our lives render them far more potent forces as aids in our fight against disease than has been the case previously. For decades an ever increasing percentage of the flower of American manhood has chosen medicine as its life work. All medical students have been trained in good schools where they have learned the essentials of medicine and at least the rudiments of research technic. What is still more important, the medical graduates of today have been made aware of the enormity of medical knowledge as well as of its incompleteness. For years such well-trained, level-headed doctors have taken up their life work in the villages, the cities, and the institutions of our land where there now exists the necessary physical equipment for the practice of ideal scientific medicine—verily, the field is ripe for a rich medical harvest!

It does not require too much imagination to visualize the change which would take place in the practice of medicine if the majority of practitioners were motivated by the Research Spirit. Then doctors would strive harder to keep abreast with the developments in their own fields, and would seek more earnestly to determine whether a correct diagnosis was made and whether each procedure used in the management of the patient was harmful, worthless or beneficial. Each patient would become a research problem to be worked out by the individual doctor or by him in collaboration with his colleagues. Perhaps a few

examples from present practice will make my meaning clear.

During the last two decades thousands upon thousands of functioning teeth have been extracted. The instigator of this practice was that distinguished American doctor, the late Frank Billings. Billings, realizing that he had made a mistake, publicly retracted the extraction phase of his focal infection theory at the Congress of the American Physicians and Surgeons in Washington and at the American Medical Association meeting in New Orleans just a few years after the publication of his book. Yet, clinicians enthusiastically recommend, and dentists continue to extract so-called abscessed teeth with an alacrity worthy of a better cause. If the feeling of conscious ignorance and active curiosity prevailed in both professions, it should be relatively simple to determine the nature and infectivity of the "abscessed teeth" and to ascertain the dangers as well as the benefits accruing from the promiscuous removal of them.

In cardiology the purine, aminophylline, is used extensively for angina pectoris and coronary thrombosis, in the hope that the drug will dilate the diseased coronaries. Angina is a distressingly common disease. By scientific collaboration it should be relatively easy anywhere to determine the value of the drug. At the present, weekly "tonsil days" are arranged in many hospitals. If the profession were primarily interested in determining the effect of tonsillectomy, teams consisting of a pathologist, a tonsil surgeon, and an internist could easily be organized to study the effects of the operation. Surgeons are enthusiastically recommending removal of the gallbladder as a cure for all bellyaches in its environs. Are they right? The question could be answered if we really wanted to know.

A dominant Research Spirit would not only revolutionize practice to good advantage, but it would also do greater things. It would drive clinicians as it does other research workers into the wilderness of the unknown in search of new truth! There can be no question that the general practitioner and all those who practice medicine "on the outside" and have an opportunity to observe their patients from the cradle to the grave encounter more and different phases of disease than do our more cloistered colleagues who work in medical centers. If the profession "on the outside" were alert to each unsolved problem encountered and had the curiosity and will to do something about it, the individual doctor would soon find problems he could personally solve, prob-

lems he could solve with the aid of his hospital colleagues, and occasionally problems that could be successfully attacked only by the professional researcher in the larger, well-equipped medical centers. It might then come about that all types of doctors possessed by the "Holy Spirit" of medical research would collaborate with one another for the furtherance of medical knowledge. If such a miracle happened, a veritable atomic energy would be unloosed against the evils of disease!

I plead with you, my clinician colleagues, that each of you may permit your own "Anlage of Research" to develop to such an extent that it will dominate your professional life!

### HYPOPROTEINEMIA IN SURGICAL PATIENTS

MERLE J. BROWN, M.D., Davenport

Body metabolism results in the destruction of protein and it is necessary that protein replacements be made if the organism is to survive. The synthesis of proteins takes place in the individual cells using amino acids derived from protein digestion. The cells of the liver, reticulo-endothelial system and muscles are thought to be the centers of protein synthesis. The simplest protein chemical units known to be necessary in this chemical process are valine, threonine, arginine, leucine, histidine, isoleucine, lysine, tryptophan, methionine and phenylalanine. Other amino acids may be used in the metabolic compounding of proteins (albumin, globulin, and hemoglobin) but it is known that the ten named will produce growth and maintain a positive nitrogen balance.

Whipple and Madden expressed the belief that a dynamic equilibrium exists between plasma protein and cell protein. That is, protein will flow from cell to plasma or from plasma to cell depending on the conditions at the moment. They found that dogs could be maintained in nitrogen balance by administration of plasma intravenously while only carbohydrates, minerals and fats were fed orally. They believe that fats and salt favor normal nitrogen metabolism. No significant hypoproteinemia developed in the dogs, and the albumin-globulin ratio did not change despite the fact that plasma was the only source of protein. The protein reserve is not of finished protein (globulin and albumin), but exists within the cell as cell protein which can be mobilized and contributed to the blood stream as globulin and albumin. These authors believe that the great bulk

of synthesis goes on in the liver, which supplies the energy and site for amino acid aggregation. Also, it has been suggested that the fundamental protein for exchange is albumin. Globulin is a slight modification of the albumin which takes place in the body cells. Protein depleted dogs produce no hemoglobin or plasma, and are susceptible to infections. Whipple and others have shown that hypoproteinemic dogs can synthesize protein from hemoglobin.

The normal values for total serum protein are 6.5 to 8.2 grams per 100 cubic centimeters of serum, while for serum albumin the value is 4.6 to 6.0 grams per 100 cubic centimeters of serum. When the total serum protein of less than 6.5 grams per cent or serum albumin of less than 4.0 grams per cent exists, a protein deficiency is present. These values may be masked by dehydration or infection, or both. Hypoproteinemia may be present in patients who are unable to consume protein bearing foods as in gastro-intestinal diseases, or who have intestinal obstructions and are subjected to persistent vomiting. Some patients may be able to ingest protein foods but not in sufficient amounts to maintain a nitrogen balance. Patients who may be operated upon without due regard for blood protein levels preoperatively and postoperatively are subjected to possible complications such as nutritional edema, poor gastro-intestinal motility, wound infections, wound dehiscence, decubitis ulcers, and even a so-called "liver death."

Wound dehiscence is one of the most disquieting complications in abdominal surgery. Kraybill reported that investigations for the past five years have shown the importance of protein metabolism and cevitic acid in wound healing. The incidence of wound disruption in his 375 abdominal cases was 1.8 per cent. Eviscerations occurred on the fourth to fifteenth postoperative days and the location of the incisions made no difference in the occurrence. The wounds in Kraybill's series were sutured with catgut. The presence of coughs, postoperative distension or drainage did not especially influence the incidence of wound disruption. He found the average age of patients with separation of wound was 62.8 years and that the mortality after resuture was 42 per cent. Thompson's (quoted by Kraybill) experimental work in 1938 showed wound healing was retarded by hypoproteinemia. Lund (also quoted by Kraybill) wrote that a 15 per cent reduction of protein may lead to moderate delay, and that a 25 per cent reduction is enough to cause severe delay in wound healing. It has been shown that the tensile strength of catgut is accelerated by hypoproteinemia and that wound



disruption occurs less commonly when silk or non-absorbable suture material is used. All patients having wound separations in Kraybill's series had protein deficiencies with levels below 6.5 milligrams per cent.

Thornton and others investigated the serum protein changes in thoracic surgery and found a constant drop of approximately 1.0 gram occurring three to five days after major surgery. Contributing causes for this serum protein drop are diminished protein reserve, operative blood loss, loss of blood and plasma into wound and pleural space postoperatively, infection, and inadequate replacement.

Rhoads and Kasinskas produced fractures of extremities in protein depleted dogs which were fed protein free diets. It is known that serum calcium is bound up with serum protein, so that when protein depletion occurs serum calcium is reduced in amounts. Although hypoproteinemia has not been observed clinically as a cause of delayed union because of so many other factors, these experiments showed reduced callus formation in hypoproteinemic dogs.

The author has seen the effects of hypoproteinemia in surgical patients in the care of prisoners of war in the European Theater of our recent war. Well-nourished American soldiers' wounds healed normally. However, when clean surgical wounds were present in prisoners, most of whom had been on scant protein rations before their capture and in stockades after capture, a high percentage of them became infected and were slow to heal. This occurred despite the youth and vigor of the prisoners. The blood proteins of these surgical patients were in the lower limits of normal, or below. The use of chemotherapy would not always forestall the development of these wound infections.

The surgeon has at his command several methods of protein replacement which can be adapted to practically any patient. The cost of replacement may sometimes become exorbitant, but one is obliged to use them for life saving measures. A live patient is better than a dead one regardless of the expense involved. The simplest, most pleasurable, and cheapest (perhaps) method of protein replacement is by ingestion of food. The minimal protein requirement is 100 grams daily to replenish loss. The sources of proteins are from such foods as meats, cheese, milk, peanuts, and some smaller amounts from vegetables. It takes 70 to 100 or more grams of meat to supply 20 grams of protein for body metabolism. One quart of milk will supply about 35 grams of protein. A palatable

high protein diet of 300 grams may need to be ingested to supply deficiencies.

Recent years of research have developed amino acids in combination for parenteral use when insufficient protein foods can be ingested. In gastrointestinal operative procedures, these are of value for intravenous protein supply when oral administration is not feasible. Commercial preparations are packaged in 5 per cent or 10 per cent solution (with glucose). The surgeon must administer 1,000 cubic centimeters of 10 per cent, or 2,000 cubic centimeters of 5 per cent amino acid solutions in order to maintain an intake of 100 grams, the minimum intake for nitrogen balance and healing of surgical wounds. Although these solutions may cause some symptoms, such as nausea and elevated temperature on too rapid administration, they can be given without harm to the patient.

Another method of supplying protein to the patient unable to ingest food is the intravenous use of plasma. Meyer stated that it requires 2,000 cubic centimeters of plasma to elevate the circulating blood protein 1.0 gram per 100 cubic centimeters. Approximately 15 grams of protein are present in one unit (250 cubic centimeters) of plasma. Mulholland (quoted by Meyer) calculated that it would take the plasma from 26 pints of blood daily to gain and maintain nitrogen balance. Blood plasma, although useful, is expensive even when processed by governmental agencies and distributed to hospitals for civilian use. Dried plasma as purchased from commercial houses is exorbitant in price (\$35.00 for 250 cubic centimeters). The solutions of amino acids may be substituted for plasma when the plasma is used as a source of protein.

Transfusions of whole blood when administered in 500 cubic centimeter doses will supply 18 grams of plasma protein, 75 grams of hemoglobin, prothrombin, fibrinogen and immunity factors, vitamins, electrolytes, glucose, and other factors. This explains why blood was found so valuable in the postoperative recovery of patients before plasma and amino acid solutions were developed. Besides the ingredients noted above, whole blood restores circulating volume, prevents shock, preserves tissue protein, and offers some resistance to development of wound infections.

#### SUMMARY AND CONCLUSIONS

1. The importance of serum proteins in surgical patients has been discussed.
2. Normal serum proteins are necessary for prompt and complete wound healing. Dehiscence of surgical wounds is prevented by maintenance

of nitrogen balance and proper selection of suture material.

3. Methods of administering proteins have been enumerated and discussed.

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### SPONTANEOUS HEMATOMA OF THE RECTUS MUSCLE IN PREGNANCY

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Since instances of spontaneous hematoma of the rectus muscle in pregnancy are comparatively rare and present difficulties in diagnosis, an additional case is described which was observed some time ago.

#### REPORT OF CASE

The patient was a white tertigravida, secundipara twenty-four years of age. Her past history included the usual childhood diseases with complete recovery, a tonsillectomy in 1924, and in 1940 the removal of a chronically inflamed appendix. A right rectus incision had been made and the wound had healed by first intention. Her menstrual history revealed menarche at fourteen years of age with normal menses every twenty-eight to thirty days. She had had one abortion in 1941, which was afebrile, after two and one-half months of pregnancy. Her deliveries included one in 1942, which had been normal and was of eight hours' duration. The male baby weighed eight pounds fourteen ounces. The last menstrual period in this pregnancy was on June 22, 1943, and delivery was expected around March 29, 1944. The prenatal period was completely uneventful. Several urinalyses proved the absence of any pathologic elements. Her blood pressure was within normal limits and there was no excessive gain in weight.

On March 12, 1944, the patient had a severe vomiting spell. The following evening at 10:30 o'clock, while washing dishes, she suddenly experienced a pain in the midline of her lower abdomen which she said felt "like a catch." Two hours later, on March 14, at 12:30 a. m., slight labor pains started, first appearing every five minutes and later on closer together. When seen at 3:55 a. m. the cervix was not dilated. A slight soreness was

present over the lower abdomen and was more pronounced on the right side. The fetal heart tones were audible in the left lower quadrant and were normal. The membranes were intact. A few hours later the patient had good labor pains and the soreness in the lower abdomen was slightly increased, but there was practically no progress in cervical dilatation. At 2:00 p. m., on March 14, the picture had changed considerably. The lower abdomen was bulging, the bulge reaching one finger above the umbilicus where it was limited by a groove which appeared transversely over the abdomen and was more distinct during contractions. The lower abdomen was exquisitely and continuously tender and could scarcely be touched. The contractions were severe and painful, one following another at short intervals, and the patient was very uncomfortable. Vaginal examination revealed the cervix to be slightly shortened, the cervical canal open for one and one-half fingers, the membranes intact, and the vertex presenting. There was no vaginal bleeding. The fetal heart tones were normal. The temperature was 99 degrees, the pulse rate 100, red blood count 3,600,000, white blood count 11,600, hemoglobin 64 per cent. A catheterized urine specimen was clear; the saccharimeter test was negative; and the blood pressure was 118/76.

The continuous soreness over the lower abdomen, which was bulging, the transverse groove one finger above the umbilicus, which was interpreted as a pathologic Bandl's ring, intense uterine contractions with only little progress in labor, made for a striking similarity with the signs of threatening rupture of the uterus. With such a tentative diagnosis, a low cervical cesarean section was performed. A lower midline incision was made, and nothing abnormal was noted while going through the skin and subcutaneous tissue. However, after opening the anterior rectus sheath, a large hematoma of the right rectus muscle came into view, the blood being between the muscle fibers and thus spreading them apart. The hematoma was present throughout the entire length of the incision, from the symphysis up to the umbilicus, reaching slightly across the midline to the left. There were no bleeding points visible, and, since the hematoma was within the muscle, it could not be removed. The patient was delivered of a living female baby who weighed seven pounds, fourteen ounces. The abdominal wall was closed in layers without drainage, since there was no oozing at the time. The patient's postoperative course was complicated by fever, which was finally controlled by penicillin. The patient left the hospital on the nineteenth postoperative day. The



wound had healed by first intention, but a slight infiltration of the abdominal wall at the site of the hematoma was still present. When the patient was seen four weeks after delivery, this infiltration had completely disappeared. The patient felt well but was advised to wear an abdominal support for a while.

#### DISCUSSION

Spontaneous hematoma of the rectus muscle has been observed in both sexes, and Wohlgemuth<sup>1</sup> in 1923 collected 83 cases from the literature. In the majority of these the site of the hematoma was in the subumbilical portion of the recti. Rupture of the right rectus muscle was more common than that of the left. Hilgenreiner,<sup>2</sup> also in 1923, mentioned as causes of rupture of the recti, with the exception of direct or indirect force which more commonly occurs in men, infections, pregnancy, and old age. Cullen,<sup>3</sup> who published a monograph on the subject together with Brödel<sup>4</sup> in 1937, lists as causes muscular exertion, pregnancy, typhoid fever, influenza or influenzal pneumonia, heart disease, hemorrhagic diathesis, surgical operations, and rare additional causes like gallbladder disease, tetanus, and syphilis.

This paper is confined to instances occurring in connection with the childbearing function in women. It seems that the first two cases of this type reported in the literature are those of Stoeckel<sup>5</sup> in 1901. His first case concerned a multipara in whom a swelling appeared in the abdominal wall after a severe coughing spell. It was more prominent on the right side and extended from the symphysis to the umbilicus. The case was correctly diagnosed; the patient delivered spontaneously. The hematoma was incised and drained at a later date, and the patient recovered. His second case was also a multipara who had been delivered by a midwife two weeks before coming under his care. Eight days before her delivery, after a severe coughing spell, she developed a tumor in the right hypochondrium which the midwife thought to be the head of a second fetus in a twin pregnancy. The correct diagnosis in this case was facilitated by a bluish-green discoloration of the surrounding skin when she was admitted to the hospital. Incision and drainage was followed by cure.

Vogt<sup>6</sup> in 1913 observed a multipara twenty-one years of age who had developed a hematoma above the symphysis bilaterally, apparently within the rectus sheaths, several hours after expulsion of the placenta. This hematoma disappeared under conservative treatment.

Andrews<sup>7</sup> in 1916, as quoted by Cullen, reported an interesting case by Toft.<sup>8</sup> In this case a preg-

nant woman with a troublesome cough developed a hematoma of the right rectus muscle which broke through a small opening into the peritoneal cavity. The case was diagnosed as probable placental hematoma. Andrews himself reported a case of a woman eight months pregnant, who after a severe coughing spell developed a large hematoma of the right rectus muscle which was thought to be a hydronephrosis. After premature labor took place, the diagnosis was changed to inflammatory ovarian tumor. Surgical intervention a week later revealed a hematoma of the rectus muscle which contained nearly two pounds of blood.

Cullen's cases 4 and 5 belong in this group also. Case 4 concerned a colored multipara, who had been pregnant about seven months. She was wakened from her sleep by a sharp pain which continued and was not preceded by any strain or injury. There was exquisite tenderness and some rigidity over McBurney's point, where a firm tender mass could be felt. After deliberation as to the nature of this condition, the case was correctly diagnosed and was cured under conservative management. Case 5 also concerned a colored multipara. Her pregnancy was twenty-four weeks along when she developed a severe cold. Early in the morning before admission, she experienced a severe pain which was followed by the appearance of a lump in the left upper abdomen. Later the swelling had increased in size and followed the outline of the left rectus muscle. After recognizing the lesion correctly, the hematoma was incised and drained with uneventful recovery.

Kenwell<sup>9</sup> in 1929 emphasized the difficulty of correct recognition of cases of spontaneous hematoma of the rectus muscle. His own case, however, in which the hematoma in the left rectus muscle of a multipara thirty-nine years of age appeared four days postpartum, was diagnosed as such and treated by incision and drainage of the hematoma with recovery.

In the same year, a further instance was published by Maxwell.<sup>10</sup> It concerned a multipara thirty-five years of age, who had been pregnant six months and who had a severe cough. The diagnosis rested between twisted ovarian cyst and premature separation of the normally located placenta. When she was operated upon, a large hematoma of the left rectus was evacuated and the abdominal wall was closed with insertion of a small rubber drain into the hematoma cavity. The pregnancy was allowed to continue and the patient had a normal delivery at term.

The case reported by Hobbs<sup>11</sup> in 1938 was of special interest because this patient died due to

development of the hematoma. A multipara thirty years of age who had had five children, all weighing between ten and twelve pounds, had a severe cough for several weeks. Ten days before her expected term, after a severe spell of coughing, she noticed a sudden pain in her left lower abdomen and collapsed. On admission to the hospital, she was in profound shock and expired before it was possible to give her a blood transfusion. At the postmortem examination a large hematoma of the rectus muscle was found which contained three pints of liquid and clotted blood. A long tear was found in the posterior muscle surface at the junction of the lower and middle third. A ruptured blood vessel was not found, but it was Hobb's opinion that the hematoma arose from the deep, epigastric artery.

Considerable difficulty as to diagnosis was presented in a case Hughes<sup>12</sup> reported in 1939. A multipara thirty-nine years of age had been pregnant thirty-five weeks. She had a cold and at the same time developed a large mass on the right side of her abdomen which appeared to be intraperitoneal. The differential diagnosis considered fibroid tumor, kidney tumor, ovarian cyst, or accidental hemorrhage within the uterus. X-ray examination revealed a large kidney stone with hydronephrosis on the right side. The urine from the right kidney contained a large amount of pus. A hematoma between the rectus muscle and peritoneum was found upon operation. The right kidney was removed several months later.

Ashkar<sup>13</sup> in 1939 reported the case of a multipara thirty years of age who, having a cold, developed a hematoma of the abdominal wall after she had been pregnant five months. Under a diagnosis of ovarian cyst with twisted pedicle, the patient was operated upon and a tear in the rectus muscle was found at the level of the umbilicus which involved most of its breadth and thickness. The muscle ends were approximated and the pregnancy was allowed to continue. Normal delivery followed three and one-half months later.

Thomas<sup>14</sup> in 1943 mentioned a case of hematoma of the right rectus muscle in a multipara. The case was complicated by the fact that no fetal heart tones were audible. Under the diagnosis of premature separation of the normally implanted placenta, the membranes were ruptured and a scalp traction forceps applied. Since this did not start labor, delivery was effected by low cervical cesarean section. The fetus was dead but not macerated. The abdominal wall was closed and a drain left in the right rectus sheath.

Keevil<sup>15</sup> in 1943 related the case of a multipara thirty-four years of age, close to term, who

had chronic bronchitis and developed hematoma of the left rectus muscle (upper part), after having fallen on her abdomen ten days before. Spontaneous delivery was followed by laparotomy on the third day of the puerperium under the diagnosis of ovarian cyst with twisted pedicle. Drainage of the hematoma was carried out with recovery.

Another case of rupture of the left rectus muscle is described by Dawson.<sup>16</sup> A multipara thirty years of age, at term and suffering from a cold and severe coughing spells, was stricken with pain in her left side, which was at first intermittent and later constant. A tumor found on the left side of her uterus was thought to be an ovarian cyst with twisted pedicle, or with bleeding into it. Classical cesarean section was performed, during which the hematoma was not disturbed. Recovery followed. This patient and the preceding one were both obese.

A thirty-seven year old multipara, who had been pregnant thirty-one weeks, was concerned in the case reported by Liggett.<sup>17</sup> This patient, who had chronic bronchitis, developed a hematoma in the right rectus muscle (upper part). Laparotomy under the diagnosis "acute abdomen" revealed the true condition. Evacuation of the clot, hemostasis, and drainage of the hematoma cavity led to recovery. The patient had a normal delivery at term.

Finally, the case of a tertipara thirty-six years of age was recorded by Rose<sup>18</sup> in 1946. In this instance the patient developed an upper respiratory infection one week before term, with severe spasms of coughing. Shortly afterwards she complained of a severe pain in the left lower abdomen where a mass the size of a small grapefruit could be felt along the left side of the uterus. Under a diagnosis of ovarian cyst with twisted pedicle and hemorrhage, an exploratory laparotomy and cesarean section were performed. A large hematoma in the left rectus muscle was found and left undisturbed. A living female baby was delivered and the abdominal wall closed without drainage. There was uneventful recovery.

#### COMMENT

Striving to bring out the common characteristics of the reported case and those cited from the literature, it can be said that spontaneous hematoma of the rectus muscle predominantly occurs in multiparas. Pregnancy and labor seem to have a definite relationship to its occurrence. Culbertson,<sup>19</sup> in his excellent paper on its obstetric significance, stated that most female patients in whom it was found either were pregnant or had had children before. A contributing cause in most



cases was a cold with coughing. However, in Cullen's case 4 and the case presented in this publication there was no history given of a cold preceding the hematoma, although a vomiting spell occurred twenty-four hours before onset of the abdominal pain in the latter. The age seems to play an unimportant role. It was formerly believed that mainly women over the age of thirty-five years were stricken, but the patient in the presented case was only twenty-four, and the one in Vogt's case only twenty-one. Practically all of the hematomas occurred during the second half of pregnancy.

Considerable difficulties lie in the diagnosis. In some cases the nature of the lesion was recognized correctly, but in several of them it was not and an intraperitoneal disturbance suspected. The reported case closely resembled threatening rupture of the uterus. The case of Hughes, in which a hematoma developed but a kidney stone was demonstrated on the same side, and the case of Thomas, in which the fetal heart tones disappeared and the woman showed signs of increasing anemia, certainly exhibited difficult diagnostic features. It may be of help in the future to include the possibility of spontaneous hematoma of the rectus muscle routinely in the differential diagnosis in instances of apparent intraperitoneal complications of pregnancy and labor, especially if the patient is a multipara in the second half of pregnancy and gives a history of having a cold with coughing spells. Torpin<sup>20</sup> believes that soft tissue roentgenography may be of help in the diagnosis.

While the prognosis is usually favorable, Hobb's case terminated fatally. For this reason it is believed that the patients in all cases diagnosed or suspected as spontaneous hematoma of the rectus muscle should be kept under close observation.

#### SUMMARY

1. A case of spontaneous hematoma of the rectus muscle in pregnancy is presented.
2. The literature shows that this condition predominantly occurs in the second half of pregnancy in multiparas who are having a cold, regardless of their age.
3. The diagnosis is difficult, but routine inclusion of this lesion in the differential diagnosis of apparent intraperitoneal complications of pregnancy in women who may be classed in the foregoing category, may facilitate recognition in the future.
4. Because the prognosis is not always favorable, patients with this complication should be given the benefit of close observation.

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### COLLEGE OF MEDICINE CLINICOPATHOLOGIC CONFERENCE

#### ABSTRACT OF CLINICAL HISTORY

The patient, a white male fifty-nine years of age, was admitted to the Neurology Service on January 28, 1946, at noon and died the following day at 9:00 p. m. Due to the patient's abnormal mental state, the history was obtained from his wife.

The patient was perfectly well until August, 1945, when he gradually began to lose his appetite. On October 29, 1945, a limp of the left leg was first noted and there seemed to be poor use of the left arm. These symptoms appeared overnight. There were no other complaints at the time and the patient was able to be up and about. A few days later the local physician examined the spinal fluid and reported that it was entirely negative.

On November 2, 1945, the patient had a convulsion involving only the left side of his body. The seizure lasted ten minutes and was not accompanied by unconsciousness. Following it, the

weakness of the left leg and the left arm was more pronounced. There was headache associated with the attack and there was some residual head discomfort for several hours after the end of the episode.

At 2:45 p. m. on November 16, 1945, the informant was awakened by a call from the patient stating he was about to have another "attack." A convulsive seizure occurred which was limited to the left side of the body and not associated with unconsciousness. Following this attack, there was paralysis of the left arm and leg but no apparent impairment of consciousness.

No new complaints appeared until December 23, 1945, when at 8:30 p. m. the patient had another convulsive seizure involving only the left side of the body. Again there was no impairment of consciousness and the episode lasted only five minutes. However, for a few days after this he seemed cloudy mentally but this symptom gradually disappeared. Vomiting appeared the last few days of December and the patient complained of severe headaches and much dizziness. The vomiting disappeared after three days, but there was almost complete loss of appetite and he became gradually weaker.

During the month of January, 1946, speech gradually became difficult and on January 20, 1946, urinary incontinence was noted for the first time. Three days before admission to this hospital the patient became semistuporous, but he would respond when stimulated by members of his family.

It was reported that the patient contracted syphilis in 1910 and received an undetermined amount of antiluetic therapy between 1910 and 1914. The referring physician reported a positive blood Wassermann reaction in 1944 and treated the patient with medication intravenously and intramuscularly for one year.

The physical examination revealed a dehydrated, emaciated, lethargic white man who was able to respond only to simple commands. The ocular rotations were normal and the optic disks showed no evidence of papilledema. The tests of the cranial nerves were normal except for a questionable droop of the left buccal angle. The condition of the neck was not remarkable. There was no enlargement of the area of cardiac dullness. The apical rate was 80 beats per minute and the rhythm was regular. The blood pressure was 100/80. Examination of the chest revealed nothing significant. No abdominal masses or tenderness were noted. There was a penile scar, at the urethral meatus. The left arm and leg were moderately spastic and appeared to have less than 25 per cent of normal function. The reflexes were

as follows: biceps jerks, right 2+, left 3+; knee jerks, right  $\pm$ , left 3+; Achilles jerks, right 1+, left 2+; abdominal reflexes, right 2+, left 0; and the cremasteric reflexes were right 2+, left 0. The plantar response was flexion on both sides. An adequate sensory examination was impossible because of the condition of the patient. The urine was not examined. No blood counts were reported on the record. The blood serologic examinations were reported as follows: Kolmer test, negative; Kahn test, doubtful; and Kline test, doubtful. The lumbar puncture revealed a slightly xanthochromic fluid containing 400 red blood cells



Fig. 1. Carcinoma in right main bronchus with extensive involvement of right upper lobe.

per cubic millimeter and under a pressure of 350 millimeters of water. The spinal fluid Kolmer test was reported as being negative. The blood urea nitrogen was 41.3 milligrams per cent and the creatinine was 1.6 milligrams per cent. X-ray films of the skull were interpreted as follows: "Posterior-anterior and left lateral films of the skull show both tables to be of normal density, and there are no abnormal areas of bone erosion. The pineal body shows calcium within it, but is normal in position. The sella turcica is fairly well visualized and shows no abnormality." X-ray films of the chest showed "the left lung field to be clear. There is an area of increased density in the right apex. The lower lung field appears essentially clear."

The patient's condition remained unchanged until 8:00 p. m. January 29, 1946, his second hospital day. At that time he developed Cheyne-Stoke's respiration with very long periods of apnea. He was unconscious and the heart action was very feeble. The rectal temperature was 102.4 degrees. The patient died at 9:00 p. m.

#### SUMMARY OF NECROPSY FINDINGS

The outstanding finding was a bronchogenic carcinoma of the apical portion of the right lung, with widespread metastases. There was a large



metastatic growth at the junction of the parietal and frontal lobes on the right side. This measured six centimeters in diameter. There was a small metastatic tumor in the left temporal lobe.

#### *Necropsy Diagnoses:*

Carcinoma, squamous cell type, poorly differentiated, bronchogenic, upper lobe, right lung, with metastases to:

a. Lymph nodes, tracheobronchial, right, with invasion of right main bronchus.

b. Lung, right upper lobe.

c. Adrenals, bilateral, with extension to right lobe of liver and upper pole, right kidney.

d. Kidneys, bilateral.

e. Brain, right frontoparietal and left temporal lobes.

Emphysema, bilateral.

Pulmonary congestion, bilateral.

Epiploic appendix, strangulated, descending colon.

Meckel's diverticulum, ileum.

Arteriosclerosis, generalized, moderate.

Prostatic hyperplasia and urethritis, posterior, chronic.

#### CLINICAL DISCUSSION

*Dr. Clark H. Millikan, Department of Neurology:* In the protocol it is recorded that there had been convulsive seizures limited to the left side of the body, and that over a period of months progressively increasing weakness of the left arm and leg had been noted. These focal attacks have a local beginning, often with a twitching or jerking of a finger or fingers. This gradually extends, involving first the neighboring structures on the same side of the body, often including the entire side. The seizure may ultimately become generalized in nature. In adults the history of focal convulsions should be considered evidence of an organic brain lesion until proved otherwise.

The most common cause of hemiplegia occurring in middle age is some type of vascular accident which includes, in general, thrombosis, hemorrhage, embolism, and ruptured intracranial aneurysm. The onset of any of these calamities comes with more or less suddenness, particularly is this true of hemorrhage, embolism, and ruptured intracranial aneurysm. Hemiplegia due to cerebral thrombosis may take hours to reach its maximum extent but the time involved is, nevertheless, usually less than a day. The rupture of an intracranial aneurysm produces sudden onset of headache, with or without alteration in consciousness, and fresh blood can be demonstrated in the spinal fluid when lumbar puncture is done.

Neurosyphilis is detected by the discovery of positive Wassermann reaction of the blood and

spinal fluid and the presence of an abnormal number of cells in the spinal fluid.

The presence of a brain abscess is suggested by a history of middle ear or mastoid infection, severe sinus infection, skull fracture with infection, or a focus of infection elsewhere in the body. The presence of chills, fever, and leukocytosis lends credence to this diagnosis but these aids are often absent. Progression of the lesion makes operative intervention necessary.

Encephalitis of almost any type can be distinguished by its onset in a few days' time. Some of the symptoms are the presence of multiple cranial nerve palsies, alterations in consciousness, a mild to severe febrile reaction, generalized convulsions at times, and often an increased number of lymphocytes in the spinal fluid.

A pyogenic meningitis producing hemiplegia comes on rapidly with chills, fever, headache, stiff neck, photophobia, alterations in consciousness; and spinal fluid examination shows the presence of hundreds or thousands of polymorphonuclear leukocytes.

Multiple sclerosis with its up and down history over a period of many months, together with isolated cranial nerve findings, ataxia, sensory impairment in the extremities and difficult control of bladder function, can be distinguished from other causes of hemiplegia with a fair degree of certainty.

The absence of pathologic reflexes together with bizarre movements, or attempts at movement, point the way toward a diagnosis of hysteria. The bizarre movements are best elicited when the patient tries to walk—many weird gestures being the result.

Expanding intracranial masses can be produced by infection, such as brain abscess or gumma; by trauma, such as subdural hematoma; or by neoplasms. From the confusion of diagnostic criteria described in the literature concerning this group comes one axiom of permanent value: The symptoms and signs of a progressive lesion of the brain constitute evidence of the presence of an expanding intracranial mass until proved otherwise.

During a period of four months, in a series of jerky progressions, the patient in this case lost the use of his left arm and leg. He had convulsions involving only the left side of the body, and he became gradually unable to express himself. He had, therefore, evidence of a progressive lesion of the brain. A diagnosis of an expanding intracranial mass was made.

The most common cause of this syndrome of an expanding intracranial mass is a neoplasm of the

brain. In an effort to eliminate needless intracranial explorations and useless brain trauma, an attempt is made to discover the possible presence of a neoplasm, primary elsewhere in the body, which it is reasonable to believe has metastasized to the brain. A history and examination of the lungs, breasts, thyroid, gastro-intestinal tract, kidneys, and the skin must be a part of the evaluation of each case of brain tumor. A roentgenogram of the chest must be made in every case of brain tumor. If these extracranial sites of origin of a primary tumor are satisfactorily excluded, a diagnosis of primary tumor of the brain is made, and localizing studies in the form of an air encephalogram or ventriculogram are performed. Evidence, in these studies, of the presence of an intracranial space-occupying mass is an indication for surgical exploration.

*Clinical Diagnosis:* Brain neoplasm, right hemisphere.

*Dr. Vernon W. Petersen, Department of Surgery:* For the purpose of this discussion, I shall draw on material obtained from 200 clinical cases seen at the State University of Iowa Hospitals, 50 autopsies from the same source performed on bodies where the cause of death was carcinoma of the lung, and finally on the literature.

A review of 200 clinical records produces a fairly clear picture of the natural history of the disease and it goes something as follows: Carcinoma of the lung occurs with essentially the same age incidence as do malignancies in general. In our group 15 per cent occurred in patients less than 40 years of age and 36 per cent were seen in persons less than 50 years of age. Males are affected approximately three and a half times as frequently as females.

Coughing is typically an early symptom and in the majority of cases is initiated following an episode of abrupt bronchial obstruction with distal infection. The patient refers to this as the "flu" and such a story is encountered again and again. Following this acute episode, the patient temporarily improves but continues to have a cough productive of thick, whitish sputum. The patient loses valuable time at this stage by waiting until additional symptoms supervene. The subsequent course of events is more variable—evidence of lung abscess, hemoptysis, local invasion of the chest wall or mediastinum, or distant metastases may finally bring the patient to the hospital where proper diagnostic procedures are carried out. In discussing the diagnosis, it may be said that the axiom, "The lesion should be seen and not heard," is equally applicable in malignancy and tuberculosis. Roentgenogram of the chest is sug-

gestive in a remarkably high proportion. The correct diagnosis was made in 65 per cent of a series of 61 cases where biopsy was subsequently confirmatory. The diagnosis was suggested in an additional group.

Bronchoscopy and biopsy are often of assistance in establishing the diagnosis. In our cases, bronchoscopy was performed in 75 per cent of those instances where the clinical impression was carcinoma of the lung. In about 75 per cent of the cases in which lung tumor does exist, it can be visualized and biopsy made through a bronchoscope. For the sake of completeness, it is necessary to mention several remaining diagnostic methods which are occasionally of assistance. They include biopsy of evident metastases, section of centrifuged pleural fluid, pneumothorax and thoracoscopy, aspiration biopsy, bronchography, and sputum examination.

By the time the average patient reaches this hospital, between five and six months will have elapsed since the onset of his symptoms and four out of five will have obvious evidence of inoperability. It is especially interesting to note that 10 per cent of the patients with bronchogenic carcinomas admitted here present themselves on the neurologic service because of symptoms following intracranial metastases, or because of involvement of the brachial plexus by an apical tumor. In this inoperable majority, the disease will pursue its natural course to an early termination. The duration of life after onset of illness in the cases seen here averages nine months. In the group of 50 autopsies done here, invasion and metastasis were prominent. In 81 per cent there was regional node involvement, in 50 per cent the parietal pleura was affected, and in 41 per cent there was metastasis to the central nervous system. Bone metastases were present in 35 per cent and, interestingly, there was involvement of the opposite lung in 23 per cent. Liver, adrenal, and pericardium or heart were occasionally involved.

There are certain points of interest in connection with the histology of lung tumors. In our postmortem series, in 41 of the 50 cases there were 20 adenocarcinomas, eight epidermoid tumors, six undifferentiated tumors, and seven mixed carcinomas. The total duration of symptoms in 13 cases of poorly differentiated tumor was found to be five and one-half months, while in eight cases of definitely well differentiated tumor, the duration was eleven and one-half months.

Turning now to a consideration of those individuals who comprise the 20 per cent group with no obvious evidence of inoperability at the time



a diagnosis is made, exploratory thoracotomy is justified whenever there is no obvious indication of inoperability.

It may be stated, with considerable basis in fact, that pneumonectomy was in a developmental stage until approximately 1940. In a survey made by Overholt, he reported 35 post-pneumonectomy patients alive in 1939, of whom 19 had been alive for two years or more. He did not include Dr. Evarts Graham's cases in this survey.

Since 1940, those complications which previously had been responsible for a considerable operative mortality have been largely eliminated. The evaluation of survival statistics after resection will, however, require the passage of perhaps another 10 or 15 years.

The most recent report of a series of operative cases comes from the Lahey Clinic where 49 resections were done during the 15 year period ending December 31, 1944. They report 49 total resections with 8 or 16 per cent hospital deaths; 23 or 47 per cent subsequent deaths; 4 or 8 per cent alive with recurrence; and 14 or 28.5 per cent alive and well. Of the 14, the number of years since operation are six patients, one year; two, two years; four, three years; one, four years; and one, nine years.

This represents 9 per cent of a total of 157 proved cases of malignant lung tumors seen at the Lahey Clinic during the period.

Since 1940 there have been 24 exploratory thoracotomies done in this hospital and the lesion has been found inoperable in 18. Pneumonectomy has been performed on six patients since 1940. Of these there are now two alive as follows: One man, 58 years old, now four years postoperative and well. Diagnosis: Adenocarcinoma of the lung. One boy, 18 years old, now 18 months postoperative and well. Diagnosis: Adenocarcinoma of the lung. In addition, there is one female, 31 years of age, who is alive and well 18 months after a lobectomy. The specimen was diagnosed histologically as containing adenocarcinoma.

**AMA SESSION  
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## CLINICOPATHOLOGIC CONFERENCE

### CASEOUS TUBERCULOSIS OF THE ADRENALS WITH SARCOIDOSIS OF OTHER VISCERA

MAJOR JOSEPH E. FLYNN, M.C., A.U.S.

#### CASE REPORT

*Clinical History:* The patient, a white male fifty-four years of age, entered the hospital on August 18, 1944, complaining of weakness and weight loss beginning in March, 1944. The history revealed that the patient had had two previous hospitalizations in 1942. These admissions were for an "arthritis" of the right wrist. The brevity of the available clinical records of these two admissions prevents interpretation of the wrist pathology. The findings that were recorded were more suggestive of a tenosynovitis than of an arthritis. In the clinical record of the second hospital admission (1942), the blood pressure was recorded as 146/90. On this admission, it was observed also that the patient had an enlarged liver extending to the umbilicus. Following discharge from the hospital on May 9, 1942, the patient was apparently well for the next twenty-two months. In 1944 he developed weakness, loss of weight, and vague gastro-intestinal complaints. The weight loss and weakness continued through July, 1944, and in August his condition was such that he was unable to work. He stated his weight loss was so marked that his friends did not recognize him. In July he had two hemorrhages which he described as coming from the throat. He was uncertain as to whether the blood was coughed up or vomited. He had frequent nose bleeds. In July, 1944, he noted an ulcer on the right side of the tongue. In the same month he had an attack of "indigestion with gas." The pain was apparently localized to the epigastric region, and was relieved by induced vomiting. He described the vomitus as resembling egg white. He did not believe there was any bile or blood present. This attack was followed by a vague heavy sensation in the epigastrium that usually occurred before meals every third or fourth day. This vague heavy sensation would frequently recur one to one and a half hours after meals. He stated that the pain was never severe. No particular foods seemed to aggravate the situation. He restricted his fluid intake because of "gas and distention" which followed the taking

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of liquids. During this period of voluntary restriction of fluid intake, he had chronic constipation with bowel movements every third or fourth day. At no time did he note blood or a tarry color of his stools. In June there was some swelling of the ankles which he said was most marked in the evening, and was absent in the morning. There was no history of nocturia, hematuria, frequency, or burning. There was no history of dyspnea.

*Past History:* The patient had the usual childhood diseases. His appendix was removed in 1926, and his tonsils in 1936. At the time of the tonsillectomy a part of the soft palate was removed on the right side. He denied venereal disease. He was in Panama from 1918 to 1919.

*Family History:* Not remarkable.

*Physical Examination:* Examination revealed marked emaciation. There were petechiae of the lower extremities. There was an ulcerated lesion of the posterior one-third of the tongue. The pulse rate was 84, the temperature 97.8 degrees, respirations 20 per minute, and the blood pressure was 60/40. On September 29 the blood pressure was

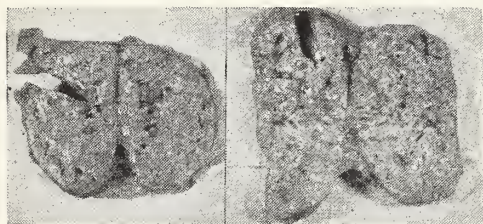


Fig. 1. Photograph of adrenals showing their large size and replacement of the parenchyma by caseation necrosis. The right adrenal measured 8.5 x 6.5 x 4.5 centimeters. The left adrenal measured 11.5 x 7.5 x 3.8 centimeters. The capsules were intact.

70/40. The heart sounds were weak, no murmurs were heard, and no enlargement of the heart could be demonstrated. The liver was enlarged, smooth, and nontender. The liver edge extended five fingers below the right costal margin. The spleen was enlarged, extending down to the crest of the ilium. A small umbilical hernia was present. There was an old appendectomy scar on the right lower quadrant of the abdomen. The right wrist was carefully examined but no abnormalities were noted. There was no peripheral lymphadenopathy. The neurologic examination was negative.

*Laboratory Examination:* The red blood cell count was 5,000,000, the white cells 8,600, and the hemoglobin was 14.5 grams. The neutrophilic polymorphonuclear leukocytes were 46 per cent, the lymphocytes 39 per cent, the monocytes 11 per cent, and the eosinophils 4 per cent. There was a one plus albumin and occasional hyaline casts

in the urine. The specific gravity of the urine varied from 1.006 to 1.008. The clotting time was three minutes, and the bleeding time fifty seconds. On August 25, 1944, the total blood proteins were 9.5 grams per 100 cubic centimeters. The albumin was 5.2 while the globulin was 4.3. The Kahn test was doubtful, and the Wassermann negative. The blood urea was 9.9 milligrams per 100 cubic centimeters. The icterus index was 10.5. The blood van den Bergh reaction was normal. In the latter part of August, the bromsulfalein liver function test revealed 25 per cent retention of the dye after thirty minutes. The red blood cell count was 4,600,000 and the white blood cells totaled 6,200. The hemoglobin was 80 per cent. The polymorphonuclear leukocytes were 46 per cent, the lymphocytes 44 per cent. Roentgenograms of the gastro-intestinal tract and of the bones were negative. A roentgenogram of the chest revealed prominent apical caps. The lung fields were otherwise considered negative for active pathology. The aorta was described as sclerotic and the heart normal in configuration. The electrocardiogram was normal. On September 24, 1944, the total blood protein was 4.6 grams per 100 cubic centimeters. The albumin was 3.5 grams. The albumin-globulin ratio was 1.65. The alkaline phosphatase was 5.3 units (normal) and the acid phosphatase was 1.8 units (normal). The blood calcium was 12.0 milligrams per 100 cubic centimeters. The urine was negative for melanin. No Bence-Jones protein trace was present in the urine. A gastric analysis revealed blood in the gastric contents. The free hydrochloric acid was 104. The Kahn test was consistently doubtful. The Kolmer reaction was consistently negative. The spinal fluid examination revealed nothing remarkable. The spinal fluid Wassermann test was negative. A flat plate of the abdomen indicated enlargement of the liver, with the lower border extending to the iliac crest. A rounded laminated area of calcification was present in the right upper quadrant which was interpreted as a gallstone. The spleen was enlarged by x-ray and the chest plate revealed a slight apical mottling. Comparison with the films made in August, 1944, showed no change of the lesions. Again there was a moderate dilation of the aorta, with a calcific plaque noted at the aortic knob. The heart was considered to be relatively small. The patient became increasingly weaker and most emaciated. Because of dehydration, the patient was given considerable intravenous fluids consisting of 10 per cent glucose in saline. The urinary output was recorded as one-fourth the intake. He continued to have vague abdominal symptoms. On



September 29, the patient vomited coffee-ground material. This was followed shortly by the passage of a black liquid stool. He became restless, disoriented, and semistuporous. On September 30, 1944, the nonprotein nitrogen was 145 milligrams per 100 cubic centimeters. The uric acid was 4.7 milligrams per 100 cubic centimeters. The blood creatinine was 1.9 milligrams per 100 cubic centimeters. The blood sugar was 77 milligrams per 100 cubic centimeters. The plasma carbon dioxide combining power was 10.7 milli-equiva-

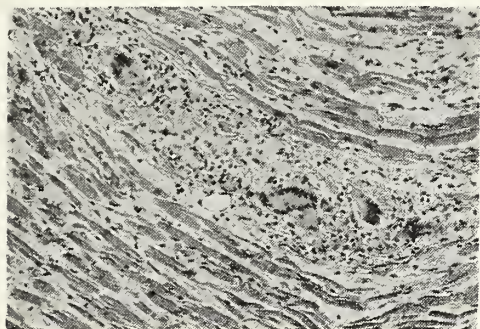


Fig. 2. Photomicrograph of the left ventricular myocardium showing one of the many interstitial infiltrates made up of reticular cells, multinucleated giant cells and lymphocytes. A.M.M. Neg. 87905 (x 250)

lents per liter (normal 44 to 52 milli-equivalents per liter). The respirations were deep and the rate increased. The patient became comatose. Four hundred thirty millimols of sodium bicarbonate were given intravenously. Following the administration of the sodium bicarbonate, the patient became conscious. Consciousness, however, lasted for only a few hours. The patient again became comatose and expired at 1:30 a. m., October 1, 1944. The blood pressure one hour before death was 40/20.

*Clinical Diagnosis:* Cirrhosis, hypertrophic, severe, cause undetermined.

#### NECROPSY ABSTRACT

At autopsy, the liver was massively enlarged, weighing 3,100 grams. The capsule was smooth, thin and intact. Beneath the capsule, small cloudy white opacities were seen, measuring 2 to 5 millimeters. Despite the enlargement of the liver, the lobular architecture was preserved. The spleen had a slate gray color. There was no wrinkling on manual compression. On section through the spleen, the cut surface swelled forward. The pulp was soft reddish brown in color. Careful inspection of the pulp revealed it contained tiny prominent nodules intimately and often inseparably coalesced. They were semitransparent and grayish white in color. In many areas it was difficult to differentiate between malpighian corpuscles and

the small nodules just described. The left adrenal weighed 190 grams, the right adrenal 110 grams. As the weight indicated, both were tremendously enlarged, the right measuring 8.5 x 6.5 x 4.5 centimeters, the left 11.5 x 7.5 x 3.8 centimeters. Neither adrenal showed any remnant of normal architecture. Both were completely replaced by amorphous, soft, crumbly yellowish tissue. In the first portion of the duodenum, there were two defects of the mucosa, both of which were irregular. One was located on the posterolateral aspect, and measured 2 x 1.5 centimeters. The other was on the anterolateral aspect, and it measured 2.5 x 1.5 centimeters. The defects were situated at the same level. The margins of the defects were slightly thickened, but did not appreciably overhang the ulcerations. The anterolateral ulceration extended into the muscularis. The right lung and right hilar lymph nodes contained an inactive, tuberculous, primary complex. There was an active reinfectious type of tuberculosis of the pulmonary apices, with honeycomb cavitation on the right.

Microscopically, both adrenals showed the typical changes of tuberculosis. In all of the sections, there was complete destruction of the adrenal architecture with replacement by amorphous acidophilic to basophilic material, in which the ghostlike remnants of blood vessels and multinucleated giant cells could still be seen. Near the capsule, dark staining deposits were present, representing calcific depositions. Scattered throughout the necrotic material and in the capsule, there were infiltrations comprised of multinucleated giant cells, lymphocytes, large mononuclears and fibroblasts. Tubercles were also present in the pericapsular connective tissue. In addition, there were multiple small circumscribed infiltrates in the liver, spleen, lungs, heart, pectoral muscles, bone marrow, kidneys, lymph nodes, stomach and tongue composed of reticular cells, multinucleated giant cells and lymphocytes. Only an occasional infiltrate displayed necrosis. The vascularity of the infiltrates was preserved. A few of the giant cells contained concentrically laminated refractile bodies of the type described by Schaumann.

Many acid-fast preparations were made of lungs, liver, spleen, adrenals, and tongue. All were consistently negative except for the lesion in the right pulmonary apex where, after tedious search, two acidfast rods were found. Guinea pigs inoculated with the necrotic tissue that had replaced the adrenals, failed to develop tuberculous lesions. Smears of the fresh tissue were also negative for bacteria and acid-fast rods. Cultures for fungi were negative.

*Pathologic Diagnoses:*

1. Addison's disease (clinical).
2. Tuberculosis, primary complex, lower lobe right lung and regional lymph nodes.
3. Tuberculosis, pulmonary apices, active, re-infection type, bilateral.
4. Sarcoidosis, liver, spleen, lungs, heart, pectoral muscles, bone marrow, kidneys, lymph nodes, stomach, tongue.



Fig. 3. Photomicrograph of the pectoralis major showing one of the infiltrates made up of multinucleated giant cells, reticular cells and lymphocytes. A.M.M. Neg. 87906 (x 250)

5. Ulcers, peptic, first portion duodenum with erosion of one into a branch of the superior pancreaticoduodenal artery.
6. Hemorrhage, intestinal, secondary to peptic ulcer.
7. Arteriosclerosis, generalized, moderate.
8. Edema, peripheral, slight.
9. Cholelithiasis.
10. Cholangitis, slight to moderate.
11. Thrombosis, partial, small branch of anterior descending coronary artery, terminal.
12. Hypertrophy, prostatic, moderate.
13. Hyperplasia, parathyroids, slight.
14. Pancreatitis, slight, secondary to extension of peptic ulcer through walls of duodenum.
15. Esophagitis, ulcerative.
16. Emaciation.

## COMMENT

The sterility of the adrenals despite the massive necrosis and typical morphologic changes of tuberculosis, can be explained on the basis that the lesions had existed long enough for most of the organisms to be destroyed. The calcific depositions indicate the chronicity of the lesions. The failure to demonstrate acid-fast rods in caseous tuberculosis of long standing is a frequent occurrence. Because of the wide margin of safety, the symptoms of adrenal insufficiency seldom appear until practically all of the cortical tissue is destroyed. The bilateral involvement of the adrenal glands supports the well-known clinical observation stressed by Rich<sup>1</sup> that tuberculosis of

a paired organ is extremely likely to be followed by tuberculosis of the other organ. The acidosis observed terminally in this case was due to the excessive loss of sodium in the urine, eventually occurring at the expense of the sodium bicarbonate of the body fluids. This metabolic disturbance was manifested clinically by a lowered alkaline reserve and alterations in the respiratory rate and depth. "The azotemia was due at least in part to the hypotension. Winton has shown that a pressure of 75 millimeters must be maintained in the renal artery for the adequate formation of urine. The elevation of the blood nonprotein nitrogen without a proportionate rise in the blood creatinine has been observed by the author in other cases of Addison's disease.

The strategic proximity of one of the peptic ulcers to a branch of the superior pancreaticoduodenal artery accounted for the gastro-intestinal bleeding. Peptic ulcers are often found in patients dying of Addison's disease. Addison, in his original report, described a gastritis with irregular superficial abrasions. Likewise, experimental physiologists have long noted the development of gastric and intestinal ulcerations in the bilaterally adrenalectomized animal. The pathogenesis of the ulcerations is as obscure today as when originally described.

The most interesting aspect of this case was the type of involvement of the organs other than the lungs and adrenals. If the dichotomous separation of Boeck's sarcoid and tuberculosis is adhered to, then to be consistent one must, in this case, make two diagnoses: tuberculosis and sarcoidosis. In support of such a dualistic concept is the massive enlargement of the liver and spleen, the history of an enlarged liver for two years, the ubiquity of the lesions, the hyperproteinemia, the inability to demonstrate acid-fast rods in the lesions and the cyto-architectonic components of the lesions. If, however, sarcoidosis is considered a peculiar response to certain infections—notably tuberculosis, leprosy, and others of unknown etiology—with the reticulo-endothelial system constituting the genetic foundation of the lesions, then the single diagnosis of tuberculosis will suffice. With the history of an enlarged liver for two years, the diagnosis of miliary tuberculosis is untenable. It is regrettable that the failure to do a tuberculin skin test, and, if necessary, to test the reactivity of the skin by Pilcher's method, prevents a correlation of tuberculin hypersensitivity with the morphologic alterations.

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STATE DEPARTMENT OF HEALTH

*Walter L. Biering*

Brucellosis in Iowa---Duration of Illness

Letters and "follow-up after illness forms" were recently forwarded to physicians of patients whose blood serum during the year 1943 showed agglutination of brucella antigen in dilutions of 1:40 or above, as notified from the Department's State Hygienic Laboratory. Queries were with reference to the following: duration of illness; complications during illness; general health of the patient as of May, 1946; and present complaints or sequelae.

On May 20, 1946, replies regarding 102 patients who had clinical manifestations of brucellosis in 1943 (or 1942) had been received through courtesy and cooperation of 101 different physicians. Some of the patients had moved to another part of the state or had been seen but one time by the attending physicians. The following summary is based on 86 reports which contain the desired information:

AGGLUTINATION TITERS

Agglutination reactions as reported in 1943, confirming the clinical diagnosis of brucellosis were as follows:

TABLE I	
Agglutination Titer	Number of Patients
1-40 .....	5
1-80 .....	8
1-160 .....	7
1-320 .....	11
1-640 .....	24
1-1280 .....	19
1-2560 .....	3
Pos.—not stated .....	9
Total.....	86

AGE, SEX, AND RESIDENCE OF PATIENTS

Distribution of the series of 86 patients according to age and sex is shown in the following table:

TABLE II			
Age Group	Male	Female	Total
1-4 .....	0	1	1
5-9 .....	2	0	2
10-19 .....	5	0	5
20-39 .....	39	2	41
40-59 .....	26	1	27
60 and over.....	5	1	6
Not stated .....	4	0	4
Total.....	81	5	86

As seen in Table II, 81, or 94 per cent of the patients were males and 5 (6 per cent) were females. Half of the patients were urban residents inclusive of small towns, and half lived in rural areas.

DURATION OF ILLNESS

The following table (Table III) shows the distribution of the series of 86 brucellosis patients according to weeks or months of illness:

TABLE III		
Duration	Number of Patients	Per cent
Under 4 weeks.....	14	16.3
5-8 weeks .....	18	20.9
9-12 weeks .....	14	16.3
4-5 months .....	9	10.5
6-7 months .....	6	7.0
8-9 month .....	3	3.5
10-11 months .....	3	3.5
Over 1 year.....	6	7.0
Over 2 years.....	9	10.5
Over 3 years.....	0	0.0
Over 4 years.....	1	1.2
Not stated .....	3	3.5
Total.....	86	100.2

Consolidation of the figures in the percentage column of Table III reveals that over half of the patients (53.5 per cent) had recovered from their illness within three months, 64.0 per cent at the end of five months, and 78 per cent within one year. Six of the patients (7.0 per cent) had symptoms lasting over one year, nine (10.5 per cent) were ill over two years, and one patient, a male farm worker, aged 25, was still having symptoms at the end of four years, with complaints of "pains in muscles and weakness," anorexia and fever (98 to 100 degrees).

COMPLICATIONS DURING ILLNESS

In the series of 86 case reports, 68 or 80 per cent stated that there were no complications associated with illness. Three reports mentioned the occurrence of arthritis and one, polyarthritis. One patient developed epididymitis, another "secondary anemia," while a third patient, duration of whose illness extended over two years, had periods of depression. One boy, aged 9, had repeated attacks of tonsillitis, was sick over two years, but

made an "immediate recovery after tonsils were out (tonsillectomy in March, 1945) and has been well ever since." Conditions antedating the attack of brucellosis were gastric ulcer (2 cases) and diabetes (1); one patient "has had attacks of asthma for years."

MORTALITY IN THE SERIES

Although five deaths occurred among the 86 patients, brucellosis was probably causative of or contributory to but two (possibly three) of these. One patient (male, aged 26) was killed in an auto accident in 1944. A second patient (male, aged 60), whose illness from brucellosis lasted over one year, had a peptic ulcer; "this patient was operated at the Mayo Clinic in the Fall of 1945 for gastric ulcer. He died 3 days following operation."

A third patient (male, aged 60) died about October 10, 1943; this patient "had hypertension for several years before this (present illness)." The illness of a fourth patient "became very serious; he was moved to a hospital but died a short time later." The fifth fatality, that of a man of 55 years of age, occurred June 25, 1945, caused by "cerebral hemorrhage, after working extremely hard for several months."

HEALTH AS OF MAY, 1946

In the series of 86 case reports under consideration, 48 or 56 per cent of the patients were stated as being "well as ever"; the health of 25 others (30 per cent) was "fair." The group of 25 patients included seven whose illness lasted a year or longer.

Of 18 patients who recovered within one year and whose present condition was reported fair, complaints were indicated as follows: Tire easily (6 patients); weakened condition (4); recurrence of symptoms (4); fever (3); joint pains (2); sweats (1); malaise (1); chill off and on (1).

Considering separately 15 patients whose illness endured a year or longer, seven of these were stated as being "well as ever," seven were "fair," while the health of but one was "poor." Of the seven patients whose illness lasted longer than a year, five of the reports contained information as summarized in the following table (Table IV).

TABLE IV

Patient	Age	Sex	Duration	Current Complaints
M.H.	62	M	2 years	Constipation and fatigue
D.L.	40	M	over 1 yr.	Tired, unable to do full day's work
K.D.	31	M	over 2 yrs.	Weakness, occasional fever, tires easily
D.H.	39	M	over 2 yrs.	Tires easily
L.S.	25	M	over 4 yrs.	In bed much of time, fever 98 to 100 degrees; complains of pains in muscles and weakness; anorexia

SUMMARY

A follow-up study is being made in cooperation with Iowa physicians to secure further information as to the duration of illness from brucellosis and the current state of health of patients who suffered from this disease in 1943 or 1942 and whose blood serum showed positive agglutination reaction with Brucella antigen during 1943. Information as presented in the foregoing paragraphs is based on 86 case reports completed and returned through courtesy of the attending physicians.

TICK SEASON AND ROCKY MOUNTAIN SPOTTED FEVER

A nine year old Iowa boy had sudden onset of illness during the last week of April, 1946, with high fever, headache, cough and abdominal distress. After several days, a rash appeared on his arms, legs, and body.

The child's mother had removed a wood tick from his scalp five days before he became sick. The nature of the illness, character of the eruption, and knowledge of the recent tick bite led to the diagnosis of Rocky Mountain spotted fever. A blood specimen forwarded to the State Hygienic Laboratory about two weeks after onset of symptoms showed a positive (Weil-Felix) agglutination test, confirming the attending physician's diagnosis.

Two cases of this disease have been reported to the Department of Health thus far in 1946 (through May 18). The following table shows cases of and deaths from Rocky Mountain spotted fever as recorded annually for the thirteen year period 1933-1945:

Year	Cases	Deaths	Year	Cases	Deaths
1933.....	5	1	1940.....	18	1
1934.....	5	1	1941.....	13	1
1935.....	6	2	1942.....	16	0
1936.....	1	1	1943.....	10	4
1937.....	15	4	1944.....	3	0
1938.....	5	0	1945.....	3	1
1939.....	28	6			
			TOTAL.....	128	22

The occurrence of 22 deaths among 128 reported cases, a mortality of 17 per cent, marks Rocky Mountain spotted fever as a relatively severe infectious disease.

Hyperimmune serum (Topping) may prove an effective curative measure, but must be given early after appearance of the rash. A preventive vaccine, made from chick embryo tissue by the method of Cox, is available for persons subject to repeated exposure to wood ticks.



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## MEDICAL CARE FOR VETERANS

While the physicians of Iowa may well feel signally honored in being considered in the national program for the care of veterans within the state, they should also realize the great responsibilities of entering into a contract with the Veterans Administration. Major General Hawley, in his recent address before the state meeting of the society, made it plain that General Bradley and his associates are determined that all veterans shall have the best medical care available, and have that care promptly. Each and every doctor who enters into this plan must realize that he has an individual responsibility of far-reaching significance. We are all familiar with the dissatisfaction with the care of the veteran prior to the reorganization of the Administration by General Bradley. Those who advocate social and bureaucratic methods for medical care will be highly critical of the results obtained by this program even though it is being undertaken by arrangements made at the highest levels through the state societies and the Veterans Administration.

To prevent misunderstandings which might lead to arguments detrimental to the program, the participating physicians should be informed precisely of what is expected of them. Most physicians in the state of Iowa are experienced in Workmen's Compensation practice but few have had the opportunity of handling service-connected disabilities. It is expected that the majority of the veterans applying to a physician will be seen at a period far removed from the original injury,

accident or illness which is alleged to have occurred. The physician must also know exactly what is meant by a service-connected disability.

It is fully anticipated that although the physicians of Iowa will be called upon to render this care to the veterans, the magnitude of the job to be done is not so great that it will fail. As in the past, the physicians of Iowa through unity of purpose should be able to carry out this program with credit to themselves, to the disabled veteran, and to the profession as a whole.

## MEDICAL WOMEN'S JOURNAL

The JOURNAL OF THE IOWA STATE MEDICAL SOCIETY was pleased to receive the initial issue of the *Journal of the American Medical Women's Association*. Although a bulletin of this Association has been published since July 1922, it did not take the form of the present monthly journal.

This new journal is indeed a credit to the medical women of America. Its intended purpose is to be a fitting tribute to all medical women and to be worthy of their past accomplishments. In addition to being a representative organ for reporting the best type of work by women in medicine, the publication will offer an opportunity for all members of the medical profession to submit scientific articles.

The JOURNAL offers its congratulations to the women of the profession in this forward move on their part and extends best wishes in their new venture.

## FOLIC ACID

Recently a new therapeutic substance has been made available to the physician for the treatment of certain anemias. Lederle Laboratories have succeeded in synthesizing a compound apparently identical with *Lactobacillus Casei* factor. This factor, a portion of the vitamin B complex, is necessary to the growth of the *Lactobacillus* (as well as many other bacteria) and is essential in the development of chicks (vitamin Bc), rats, and other laboratory animals.

A compound having similar properties has been widely found in nature. Termed folic acid, because of its occurrence in plant leaves (spinach), it also was found in mushrooms, yeasts, liver, and kidney. Another compound effective in preventing nutritional leukopenia, anemia, and diarrhea in monkeys, termed vitamin M, has many similarities to *Lactobacillus Casei* factor and if not identical may be closely related. At the present intensive research is being undertaken

to determine the exact nature of the interrelationship of these various factors.

While folic acid (synthetic *Lactobacillus Casei* factor) is not identical with the anti-pernicious anemia factor present in liver, Spies et al., Darby et al., Moore and other investigators demonstrated definite evidence of its anti-anemic effect in certain macrocytic anemias in relapse. These include pernicious anemia, pellagra, sprue, nutritional anemia, and macrocytic anemia of pregnancy. It was not effective in leukopenia, aplastic anemia, idiopathic agranulocytopenia or with iron deficiency anemia. Of interest is the fact that one case of carcinoma of the stomach gave a moderate hemopoietic response to folic acid.

Folic acid was found effective intravenously, intramuscularly, and orally. Definite standardization of dosage depends upon further studies now being made, although 50 milligrams daily in relapse or 10 to 20 milligrams daily for maintenance has been suggested. Present prices make therapy almost restrictive except in special cases such as liver sensitivity or in research. It is hoped that quantity production will make this potent anti-anemic factor less costly and more generally available to all.

#### ADOPTION PROBLEMS

Many couples desiring to adopt a child become discouraged with the delay they encounter when they go to a registered child-placing agency with their request and often ask the help of a physician friend in obtaining a child. They probably fail to realize the many factors entering into the adoption procedure and do not understand that some of the necessary waiting is for their own benefit. Possibly not all physicians are familiar with the principles involved in a good adoption procedure. There are three different sets of persons to be considered, first and foremost being the child, second the natural parents, and third the adopting parents.

The child should be protected from unnecessary separation from parents who might give him a good home and loving care if sufficient help and guidance were available; should be protected from adoption by people unfit to have such responsibility; and should be protected from interference, long after it has been happily established in the adoptive home, by natural parents who may have some legal claim because of defects in the adoption procedure.

The natural parents should be protected from hurried decisions to give up a child, made under special strain and anxiety.

The adopting parents should be protected from

taking responsibility for children about whose heredity or physical or mental capacity they know nothing, and from later disturbance of their relationship to the child by natural parents whose legal rights have not been fully protected.

It is estimated that the great majority of children adopted come from unmarried mothers who, not seeing any way to keep the child, sign a release permitting adoption. Possibly if they had counsel and guidance at this time, some method might be worked out by which they could keep the child.

The adopting parents in such instances adopt a baby of whom they know very little. They may be able to obtain some small picture of the background of the mother, and possibly the father, but ordinarily they take the baby at birth without knowing much of its background and before it is possible to determine its physical or mental capacity.

Licensed child-placing agencies usually place such babies in foster homes for six months or longer, where they may be observed as they are under care. Tests made at six months give a fairly accurate picture of the child both physically and mentally, thus offering some assurance to the adopting parents that they are receiving a normal child.

Case workers for the agency make a comprehensive study of the prospective home to determine its suitability for the child. Efforts are made to fit the child and parents. With the knowledge of the child's background which the agency is usually able to obtain, it is able to do a better job of fitting the child and the prospective parents, so that the child is placed in a home where it will be provided opportunities in keeping with its capacities, and where the parents need not be disappointed because the child does not fit in with the family background.

Most states with good adoption laws require a year before the adoption is made final. During this time the adjustment of the child in the family can be checked, as well as the responsibility of the parents toward the child. Should the child develop any defects which would make it impossible for it to fit in with the rest of the family, for its own sake it should be removed and placed in surroundings more in keeping with its capacities. Should the parents not measure up to their responsibilities, the child should be removed for its future good.

Courts which deal with adoptions should be educated and accustomed to handling children's cases. Hearings should be closed to the public,



and the confidential nature of adoption records should be assured at all times.

The Division of Child Welfare of the Department of Social Welfare in Iowa lists sixteen licensed child-placing agencies. They are as follows: American Home Finding Association of Ottumwa; Boys' and Girls' Home of Sioux City; Bureau of Catholic Charities of Davenport; Bureau of Catholic Charities of Des Moines; Bureau of Catholic Charities of Dubuque; Bureau of Catholic Charities of Sioux City; Christian Home Orphanage of Council Bluffs; Evangelical Lutheran Orphans' Home of Muscatine; Florence Crittenton Home of Sioux City; Hillcrest Baby Fold of Dubuque; Iowa Children's Home Society of Des Moines; Jewish Social Service of Des Moines; Ladies' Industrial Relief Society of Davenport; Lutheran Children's Home of Waverly; Lutheran Home Finding Society of Iowa of Fort Dodge; and Lutheran Welfare Society of Iowa of Des Moines.

Any doctor to whom a request for adoption is made may safely refer the couples wishing a child to any of the above agencies and know that every effort will be made to obtain for them a child who will fit into their home.

#### HAZARDS OF COMPULSORY HEALTH INSURANCE

The JOURNAL is glad to quote from the May issue of *Insurance Economics Surveys* in which appeared this timely information regarding compulsory health insurance:

"Proponents of compulsory health insurance in the United States, through design or mere good luck, have contrived to keep the debate on the level of humanitarianism, where it isn't too difficult to prove that some Americans who get no medical attention these days would get some under their scheme.

"Thus opposition to the Wagner-Murray-Dingell Bill has been left largely to the medical profession, which argues, chiefly, that it can do the job better and cheaper by itself than with Big Government at its elbow.

"This is the shirking of a plain duty by the business community. Business and industry, in the long run, must provide a rising standard of living for the country. Business and industry should examine compulsory health insurance not alone for the desirability of its professed goals—no one quarrels with those—but also as to the ultimate cost and the braking effect that cost will have on every activity of the nation.

"The Wagner-Murray-Dingell Bill, if passed,

will make this country the forty-second to promise workers and their dependents medical care and cash indemnities for wage losses due to illness. Experience in these other countries offers us some clues as to whether the nation's pay rolls can bear this load in addition to payments for old age benefits and unemployment compensation.

"The size of the burden of compulsory health insurance costs and its relation to kindred burdens already being borne are consistently underestimated by the Wagner-Murray-Dingell Bill's proponents. President Truman has said that from the outset the medical benefits of the bill will cost about \$3.25 billion a year, or 4 per cent of pay rolls. Experts say this is over-optimistic; that the initial cost will be nearer \$4 billion a year than \$3 billion.

"On top of that 4 per cent, cash benefits will start out by costing almost 2 per cent of the national pay roll. That's also on top of the 2 per cent now going into old age and survivorship benefits, and the 1.8 per cent on an average that is paid for unemployment compensation.

"Many competent observers say that even this 9.8 per cent of pay roll figure is too small to start with, and there's no room for doubt that it will soon be far above this total.

"First, medical costs will increase. 'Adequate medical treatment' is becoming a more and more expansive and expensive term. Laboratory analyses, x-rays and the services of specialists are costly. More and more expensive drugs are prescribed oftener and oftener.

"Proponents of health insurance contend that employers will be reimbursed for their increased tax payments by a rise in productivity of their presumably healthier employees. The fact is that the claim rate continues to rise every year. Assuming that a certain rise in early years would be due to the fact that sick persons, who nowadays continue to work because they have to bear the whole burden of laying off, would feel they could afford to quit work and take treatments, the load should flatten out after awhile.

"If it doesn't—and it hasn't in any other country—either national health isn't improving as promised, or else malingering isn't being dealt with firmly enough.

"Cash benefit costs will increase with medical costs. In England, the claim rate for wage-loss benefits increased 50 per cent in six years. In Germany it trebled between 1885 and 1930. In England a survey in 1938 showed that 15 per cent of those receiving cash benefits were 'not unable to work.'

"Malingering will be worse in this country than

in England because here it is planned to operate the whole scheme by a federalized bureaucracy, whereas the Approved Societies, which are cooperative groups of workers, manage the British benefits. Workers are obviously better placed to combat malingering than are agents of a democratic government.

"In the light of these considerations, it appears probable that health insurance would cost more than 8 per cent—some say 10 per cent—of the pay roll of insured workers during the next ten or 15 years. That would be a load of \$7 billion by 1960. This estimate is reinforced by the 300 per cent rise in per capita costs of health insurance in Germany from 1914 to 1929, and the 250 per cent increase in Britain in the same period. Worse yet, actuaries estimate that the increase in costs won't flatten out for 50 years.

"Unemployment compensation costs can be expected to rise, too. The current 1.8 per cent rate applies in a period of high employment. Considering the constant pressure for more liberal benefits, and the probable level of peacetime unemployment, it's highly optimistic to set the future annual level premium cost of unemployment insurance at as little as 2 per cent after the reserves accumulated during the war are paid out.

"Old age and survivorship benefits have cost less than was expected during the war. Many old people returned to work; they will retire again and draw their benefits. Moreover, there is a move afoot to liberalize the benefits. Actuaries estimate that under all reasonable assumptions old age and survivorship benefits will cost at least 4 per cent of the pay roll some time before 1960.

"Although there is a reserve for this type of insurance, it is much smaller than was originally contemplated, because Congress continues to defer the increase in taxes which would build the reserve to its projected size. This means that in a few years the whole social security bill will have to be paid on a current cost basis.

"In short, during the next ten or fifteen years, the total annual cost of social insurance will be somewhere between one-seventh and one-sixth of the payroll, or \$10 to \$12 billion. It is almost certain that before the costs are stabilized, they will equal or exceed those of the British system which are estimated at 24 per cent of the wage bill.

"It would be inexpedient to have the worker and employer bear this whole cost. The May, 1945, edition of the Wagner-Murray-Dingell Bill provided that the employer and employee should each be taxed 4 per cent of the pay roll. Thus from the outset a large and increasing sum would

have to be defrayed by the general taxpayer. Already he has to meet the costs of the federal and state governments, as well as interest on the public debt, a burden which will probably not fall below \$30 billion a year for many years to come.

"Besides supporting the various governments and paying their debts, the general taxpayer—either as an individual or a corporation—is the source of funds on which business draws for expansion and research necessary for increased productivity. The crux of the economic problem of health insurance is this:

"'Can business expand and become more productive if the funds of the general taxpayer are curtailed by taxes to meet an increasingly heavy social security burden on top of his other commitments?'

"Aside from the tremendous cost and the grave political dangers, there is the major consideration that the health insurance probably won't even have the beneficial effects claimed for it.

"This doubt is not based only on the fact, heretofore mentioned, that the rate of claims never levels off, as it should if public health were really growing better. Sir Henry Brackenbury, one of the most distinguished British advocates of health insurance, has admitted that any betterment in the health of the people may be due 'to education, public health measures and increase in medical knowledge,' and not to the health insurance system itself."

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#### MINUTES OF MEETINGS OF STATE SOCIETY OFFICERS AND COMMITTEES

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##### Committee on Medical Service and Public Relations April 7, 1946

The Committee on Medical Service and Public Relations of the Iowa State Medical Society met in the central office Sunday morning, April 7, at ten o'clock. Those present were: Dr. Fred Sternagel of West Des Moines, R. D. Bernard of Clarion, R. C. Gutch of Chariton, C. T. Maxwell and E. M. Honke of Sioux City, J. C. Parsons, R. L. Parker and M. I. Olsen of Des Moines, J. W. Billingsley of Newton, L. R. Woodward of Mason City, and J. S. McQuiston of Cedar Rapids.

A contract with the Veterans Administration for care of veterans by the members of the State Medical Society was discussed at length and the consensus of the group was that some arrangement should be worked out to have such medical care given by local physicians. It was also the consensus of the group that Iowa Medical Service should be the fiscal agent for whatever arrangement is worked out between the State Society and the Veterans Administration. Doctors licensed under Chapter 116, Code of Iowa,



1939, should be eligible to participate in the program, and the committee of Dr. Gutch, Dr. Honke and Dr. McQuiston was authorized to bring in a fee schedule and contract for consideration at the annual meeting of the Society. Meeting adjourned at one-fifteen p.m.

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**Meeting of the Board of Trustees**  
**April 19, 1946**

The Board of Trustees of the Iowa State Medical Society met at the Hotel Fort Des Moines during the annual meeting of the Society, with all members of the board (Doctors Marker, Sternberg, and Woodward) present. Dr. Marker was elected chairman for the coming year; minutes were read and approved; bills were authorized; a preliminary report of expenses of the annual meeting was given by the executive secretary; and expenses of the delegates to the American Medical Association and of the secretary were authorized for the July 1-5 meeting of the Association.

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**Meeting of the Council**  
**April 19, 1946**

The Council of the Iowa State Medical Society met at the Hotel Fort Des Moines during the annual meeting of the Society. Those present were Doctors L. L. Carr of West Union, C. H. Cretzmeyer of Algona, J. B. Knipe of Armstrong, R. N. Larimer of Sioux City, E. F. Beeh of Fort Dodge, J. C. Hill of Newton, H. A. Housholder of Winthrop, C. A. Boice of Washington, and R. C. Gutch of Chariton.

Dr. Cretzmeyer was re-elected chairman for the coming year, and Dr. Carr was elected secretary. The Council recommended publishing the talks given by Dr. Bristow, General Hawley and Senator Hickenlooper in pamphlet form and sending a copy to each member with the JOURNAL. It also recommended having a record made of General Hawley's talk which could be made available through the Speakers Bureau to every county society. Lastly, it voted that a letter be sent to General Omar Bradley expressing the sincere appreciation and thanks of the Society for sending General Hawley to the meeting.

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**Meeting of the Board of Trustees**  
**May 15, 1946**

The Board of Trustees met in the central office Wednesday evening, May 15, with all members present. The meeting was called to order at eight p.m. by Dr. Marker, chairman. Minutes were read and approved; bills were authorized; and Publication Committee matters were discussed.

Society matters were discussed, and the Board of Trustees went on record that in the future it would be its undeviating policy to pay no bills without previous authorization. Meeting adjourned at eleven p.m.

## **IOWA STUDY OF CHILD HEALTH SERVICES**

Similar health studies are now under way or will soon be launched in every state in the nation under the sponsorship of the American Academy of Pediatrics.

The project is unique in that it is a doctor's study of the situation in their own field of work, of the medical care received by and available to children, and of existing facilities for medical care. It is not a survey by a lay group or a department of the government. The important thing is to determine on a nationwide basis what medical care American children receive and what facilities for medical care are available. On such a foundation can the doctors soundly and intelligently make their own plans for the future.

Dr. Perry Amick has begun his duties as Executive Secretary for Iowa, with offices in Des Moines at 511 Iowa-Des Moines Building, in which capacity he will assist the State Chairman, Dr. James E. Dyson.

The success of the program is largely dependent on the active participation of the physicians of Iowa. Their major work will be to fill out completely and return promptly the questionnaires which will soon be sent out. The pediatricians and some general practitioners will be asked to help in the obtaining of information on hospital pediatric facilities.

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## **ASSOCIATED MEDICAL CARE PLANS**

Associated Medical Care Plans, Inc., the new corporation formed by the Council on Medical Service and Public Relations of the American Medical Association, held its initial meeting in Chicago April 27. Voluntary medical care plans representing nine states were admitted to membership: California, Iowa, Michigan, Ohio, Oregon, Pennsylvania, New Jersey, Nebraska and Surgical Care, Inc., of Kansas City, Missouri.

Purpose of the corporation is to intensify the growth and progress of the voluntary sickness insurance plans in the United States. A second meeting will be held in San Francisco at the time of the American Medical Association meeting.

The Council on Medical Service and Public Relations has established standards which cover the costs of such service and the quality of medical care that is given under the insurance policy. The nine plans already admitted meet the standards of this Council. They will be given a seal indicating that they do meet the standards and are approved. Eventually the purchaser of a policy covering medical care will know that those bearing the seal of acceptance of the Council assure him a high quality of medical care at the lowest possible insurance cost.

## Medical Care for the Veteran

MAJOR GENERAL PAUL R. HAWLEY, M.C.  
Washington, D. C.

I find a great lack of knowledge both on the part of the veteran and on the part of the public as to what medical care the veteran is entitled under the law. The law is very clear and specific; it states that all veterans with service-connected disabilities shall be given medical care for such disabilities, and for any other disability which adversely affects a service-connected disability. The law says further that veterans shall be treated for non-service-connected disabilities provided, first, that there be a vacant bed in a veterans' hospital or other federal hospital not required for a veteran with service-connected disability, and, second, that the veteran be unable to pay for his medical care and treatment elsewhere.

As far as outpatient care and treatment is concerned, the law limits that strictly to disabilities which are service-connected, and the government cannot pay for outpatient care of other types of disabilities, nor can the government pay for private hospitals for the care and treatment of disabilities, other than those that are service-connected, except in the case of women veterans. The latter provision was introduced into the law for the reason that most veterans' hospitals do not have adequate facilities for the care of women veterans. Some of our hospitals do, but in order to prevent women veterans from waiting for hospitalization, even with non-service-connected disabilities, the law permits the payment for their hospitalization in other than federal hospitals.

This has raised a question which has been published in the papers from time to time. This is the question of the care of the woman veteran in maternity cases. I have been opposed to that, and for these reasons: First, the law does not permit us, even in the case of the woman veteran, to pay for outpatient care and treatment for a non-service-connected disability, which means that we could not undertake the prenatal care of the expectant mother and pay for it from federal funds. No good obstetrician would routinely accept obstetric patients without guiding the prenatal care. This means that if we undertook to furnish obstetric care to the woman veteran we only could send her to an obstetrician at the time her pregnancy was about to end, and we think this would be very bad medical practice.

There is another reason which I think, as citizens, we should consider. It is not so simple to limit obstetric care to the woman veteran because, after all, pregnancy is a family responsibility. If the Veterans Administration undertook the maternity care of a woman veteran, the man veteran would have a very good cause to come in and say "the government should undertake the care of my wife, because I must pay for that." Until the laws are liberalized to the point where we can furnish obstetric care to all veteran families, regardless of whether the husband or the wife is a veteran, I believe that the Veterans Administration would be on false ground to undertake obstetric care for the female veteran.

In order to obtain medical care, then, under the law, the veteran must establish his right to it. If he has a disability incurred in the service, he establishes that right by filing a claim and having that claim adjudicated favorably by the Veterans Administration.

If the claim is allowed, he is entitled to first priority in medical care for a service-connected disability. If he has another type of disability, not service-connected, then he must apply to the Veterans Administration for admission to a veterans' hospital for treatment, and his case is weighed in terms of emergency. In the case of non-service-connected disabilities, the Veterans Administration attempts to admit those who are in the most urgent need of hospital care.

Veterans Administration hospitals, in general, have been of three types, although we are attempting to erase the sharp lines of distinction between at least two of the types. The Veterans Administration operates neuropsychiatric hospitals, hospitals for tuberculosis, and general medical and surgical hospitals.

In our hospitals now under construction, and in so far as we can in existing hospitals, we are attempting to place rather sizable neuropsychiatric services in general hospitals, so that the patients with acute psychoses can be given treatment in a general hospital, without being committed to a mental institution.

Our experience, where this is being tried, is that approximately 30 per cent of these patients under active, modern treatment for psychoses are spared from being committed to the chronic mental hospital. We believe, by extending this throughout our system of general hospitals, that we will



prevent the commitment of many veterans to the chronic hospitals.

Obviously, I look at the veterans' hospitals from the point of view of a doctor; many people in the country do not do this. It is curious that veterans' hospitals have been, I think, regarded more or less as domiciliary homes for the long, continued care of patients with rather incurable cases. Possibly this is because of the fact that the governing thing in the selection of sites seems to have been a nice, wooded spot, far from a city, along a stream, a beautiful place to sit outside, and a gorgeous place to be if you are anything but sick. We have fallen heir to these hospitals which are built in such isolated spots that we cannot get full-time staffs to go there and live. We have a difficult time getting nurses. In all of our hospitals which are built near cities, we have a waiting list of nurses, but in those out in the country we are short as much as 40 per cent of the nursing staff.

A hospital, as a doctor looks at it, is a workshop for a doctor. A general hospital is a place where people go when they are sick and want attention. Normally they are ready to go home as soon as they are able to use the grounds of the hospital.

That is a very important thing because we have been accused of wanting to build hospitals when there are available hundreds and thousands of beds in these surplus Army hospitals throughout the country, and why didn't we use those? The answer is that we have asked for every surplus Army hospital that was built anywhere near a center of the type where we could get full-time and part-time help. It is all right for the Army and Navy to build hospitals out in the woods, because they order their staffs. Their doctors, the orderlies and the enlisted men, are under the orders of the commanding officer, thus they have no choice in the matter of location. However, we have to employ a staff from a competitive market. Therefore, when an Army hospital is located in a small place, we have great difficulty in getting a non-professional staff. As far as the professional staff is concerned, at the present moment we need approximately 4,000 full-time doctors to staff the Veterans Administration hospitals and the regional offices now in existence. We have about 2,912 doctors. Four months ago we had 2,300. Obviously, due to this deficit, we cannot staff all our hospitals with a full-time staff. What do we do? We are forced to rely upon part-time help from the civil profession, men who will come half a day and take care of a service, spending

half a day each day, as is the procedure when visiting private hospitals.

For that we pay them a rather good salary, compared to federal salaries, and we expect to pay them well because we want the veteran to have good doctors—not poor doctors, and not cheap doctors. Since we must depend on this part-time help, where do we find it?

If we take over an Army hospital of 1,500 beds and it is built near a town of 3,000 or 4,000 people, obviously we could not get enough part-time help of any kind in that community, among the doctors, to lend us much assistance.

When we are looking for neurosurgeons, chest surgeons, and highly specialized personnel to give the veteran the best in medicine, we must turn to communities that can furnish the type of medical help in the quantity that we need. That is why we cannot take isolated, surplus Army hospitals and operate them, and that is why we cannot continue to build large hospitals in communities which cannot give us a considerable amount of part-time help from high class doctors.

There are other difficulties in recruiting. We must be perfectly honest. I think 90 per cent of the doctors will admit that the profession of the country as a whole has been rather suspicious of the medical service of the Veterans Administration, suspicious of it for many reasons. That has deterred recruiting, but it is, I can tell you, a suspicion which is rapidly fading under the honest and able leadership of General Bradley. The profession is beginning to believe that maybe, after all, we do intend to run a high class, honest medical service, and more and more excellent men are coming with us on a full-time basis.

What do we have to offer these men? When the Congress passed Public Law 293 at the end of December and the President signed it on the third of January, the Department of Medicine and Surgery of the Veterans Administration was removed from the restrictions of Civil Service. I shall not go into all the advantages of this law but to say this, that Civil Service works well, so far as I know, except when you try to hire doctors, nurses and other professional people. It is difficult to fit a professional service within the restrictions of Civil Service for this reason: Civil Service grades every position in the government. It says that this position is worth so much to the government, and that the man who occupies this position will be paid so much.

Obviously, then, in our 1,000-bed hospitals, the chief of surgery, to take just one example, could be, under Civil Service, paid \$7,200 to \$7,500 a year, on the average. They say, "All right, but

in a 700-bed hospital you cannot pay the chief surgeon that much. You can pay him only \$6,500. In a 500-bed hospital you can pay him only \$5,500, and in a 200-bed hospital you can pay the chief of surgery only \$4,000."

In so far as the patient is concerned, when anyone operates on his stomach, he wants the best, whether he is in a 200-bed or a 1,000-bed hospital.

Furthermore, the small hospitals in isolated places do require, in many cases, a much higher degree of talent because the staff physicians cannot call on the neighborhood for consultants. They have to be resourceful; they have to be experienced.

That was the principal difficulty of Civil Service. A man could not be promoted, nor his pay increased, until somebody died or retired ahead of him. Then he could be moved into a position which rated more pay.

Public Law 293 has taken those restrictions off the medical department. It says that doctors may be hired and paid within the limits of pay set up in the law; they will be paid according to ability and worth. Therefore, it is possible but not probable for a chief of surgery in a 150-bed hospital to receive as much pay or even more than a chief of surgery in a 1,000-bed hospital, with both possessing the same high degree of surgical skill.

The limits of pay for doctors in the Department of Medicine and Surgery are about \$3,640 to start with. I say "to start with" because we do not employ experienced doctors at that figure, by any means; but we left that starting figure in without protest for the youngster who has just completed his internship, never has practiced, and is just ready to take his first position in medicine. From that lower limit earnings range up to \$11,000 a year for professional work.

When one considers that the chief of the surgical or medical service, or the neuropsychiatric, radiologic, or laboratory service in the veterans' hospital has no office to maintain, no office help, nurses and stenographers, no personal library, no instruments to buy—all these being furnished—and also considering what the government takes when your income is much over \$11,000 a year—those jobs are equivalent to between \$20,000 and \$25,000 gross income in private practice. In addition to that, there is the security of retirement.

I would not even hire a doctor who was attracted by the pay we offer him. We do not want doctors who are attracted exclusively by salaries offered by the Federal Government. We are offering these doctors the opportunity to practice high class medicine, giving them a reasonable

income with which to raise their families and educate their children, and some security for their old age. We are talking about professional opportunities and not the pay offered, because I believe that a doctor, who is worth having would not go out and sell himself for \$10,000 a year in a job that offered nothing more than the salary. But we will give him as fine, as pleasant, and as intellectually profitable a professional career as he can find any place in this country. Our scale of salaries compares very favorably with the full-time academic salaries in the best medical schools of the country.

What do we plan in the future for our hospitals? We plan to make every hospital a teaching hospital. Why? Because we know that the best medicine in the world is practiced in teaching hospitals. There is nothing more stimulating to doctors than to train younger doctors. There are more checks against mistakes. The resident in the ordinary, routine examination is very careful not to have a mistake charged against him. The staff physicians are so careful not to trip up on a diagnosis which will embarrass them before the residents that the best medicine in the country and in the world is practiced in the teaching hospitals; and we want the veteran to have the best.

We want our own staffs to be alert, to be constantly in touch with the advances in medicine. We hope to have enough highly qualified, full-time men in the Veterans Administration to become chiefs of services and sections in our hospitals, and to have a large amount of the work done in those services and sections by part-time attending staffs of equal qualifications, and, under them, young residents in training for the specialties. Possibly in the future we may be able to include the interns, but at present we are working from the top down in creating this service.

Why do we say we should like to have, and shall have as fast as we can get them, our own full-time chiefs? Because the Veterans Administration itself has a responsibility under law for the medical care and treatment of the veteran and this cannot be delegated to a school of medicine or to a group outside the Veterans Administration. We must accept full responsibility and retain full control of the care and treatment of the patient. But the school or the group on the outside, on the other hand, accepts full responsibility and has full control of the teaching going on in that hospital, as distinguished from the actual care of the patient.

So long as we are short of staff, and until we can make up these shortages, either with highly qualified, full-time men in the service or ample



help from part-time men, we can only expand this service to take care of more veterans by reducing the quality of the care we are now giving.

Again, as a doctor—I am not speaking of the other implications of this problem—but, as a doctor I can never consent to reduce the standard of care given the veteran in our hospitals merely to expand and extend the privileges of that care to

thousands of other veterans, who, under the present law, are entitled to such care only when there is a vacant bed.

We can only consider expanding this service when we have a sufficient number of doctors to handle it. We would be betraying the veteran, disabled in the service of his country, if we ever expanded wildly at the price of mediocre medicine.

## Social Security and Pending Legislation Affecting It

SENATOR B. B. HICKENLOOPER, Washington, D. C.

It gives me a great thrill to address you as "Fellow Iowans" after a hectic sojourn in Washington. It is good, indeed, to be back in Iowa, back where we think we have some basic conception of the true fundamentals of the American system of progress under free enterprise and stimulus.

To Governor Blue I should like to say that we have had fine association—personally, and in the legislative, administrative, and executive branches of the government of this state—for a number of years. I am certain you know, as I do, that Governor Blue has had during those years a progressive and a farsighted grasp of the long range problems we must meet under the American system, in social matters, in health matters, and in general political matters. In that field he has progressed steadily, step by step, in his approach to those problems, and the accomplishments he has brought in his time, through his efforts and his way, have been helpful indeed. I am proud that it has been my privilege to be associated with him, to receive his help from time to time in many of the problems in which we are mutually interested.

To Dr. Bernard I will say that I have appreciated his extensive and sympathetic help in some of these complicated and professional problems which have come before me in the past years, and on which I have had eventually, in one way or another, to make a decision. I have found that he and a number of other members of your profession, who have occupied positions of responsibility in your group, have been completely unselfish in their public-spirited advice and help in the approach to these public problems.

Our guest this evening, General Hawley, who has been with you today, has undoubtedly given you a great deal of excellent information about public matters relating to health. Perhaps I should

not say this to him, but I shall say it to you, that in Washington, among those who daily mool in the conflicting and ramified avenues and sometimes gopher holes of government, there is great respect for the integrity and the high degree of intelligence and sincerity General Hawley is believed to have brought and is credited with bringing to the public problems that are so peculiarly those of government. He has the concept of the exercise of public responsibility in those fields, and I have seen no evidence that he or any of his ideas propose to transgress beyond that sphere in the fields in which government must and should discharge its particular duties and its particular activities. I want to say that General Hawley, in bringing to you the information that he has today, speaks with authority; he speaks with reliability; and he speaks with the confidence of a great many public officials in Washington who rely upon him and who trust him.

I noticed he said something, as is too often the case when a member of the Congress is around, about the pay scale. That has been a troublesome problem indeed, and many of us realize that in government professional fields there has been a gross inadequacy of compensation in public service. But I believe General Hawley would be one of the first to agree, although I would not call upon him to make this positive statement, considering his public status, that one of the great difficulties in the Veterans Administration is to secure, all the way through, adequate professional ability to meet the professional responsibilities of the Veterans Administration. To put it bluntly, you have some good doctors and you have some lousy ones in the Veterans Administration, or have had, and that is what they are struggling against. A great portion of the difficulty is due to the factor of pay. If that has been the experience of public medicine when government discharges the responsibility in this restricted field, may I ask you what it would be when 85 to 90

per cent of the people are regimented into social security systems where doctors are paid a stipend and the poorest gets as much as the best? I wonder what the results would be in an over-all system.

We approach our public problems sometimes on the basis of complete lack of common sense and common judgment in fixing the equitable pay commensurate with the responsibilities that go with these public duties.

Tonight I wish to discuss the question of the social security problems, with special emphasis upon the question of socialized medicine and the implications that are being raised in the country along this line. I realize at the outset that there is a vast difference of opinion; that it depends entirely upon your viewpoint; and that you, as professional people, may have one viewpoint based upon your experience and there are other segments of the population who may have another viewpoint based upon their experience and their desires.

It is a great personal pleasure for me to have the opportunity of meeting again with the Iowa Medical Society and to visit with you for a short time this evening. My associations with you and the physicians of the state of Iowa in the past have been pleasant, and I have been stimulated many times by the public-spirited attitude you and your representatives have taken in connection with public problems and with your responsibilities to the public which you serve so well.

I am especially proud of the fact that the state of Iowa, backed by the physicians of Iowa, occupies a commanding position in the forefront of the states of this nation in our approach to the responsibilities for and ministration to public health of our local communities as well as to the over-all advancements in state-wide public health activities.

Some years ago, when times were bad and the people were out of work and unable to pay their bills, your organization sponsored and encouraged the establishment in local communities of a system of service whereby people who needed medical attention could get it and at a price or a fee that could be met by those who could pay or as a public service to those who could not. I believe that the systems worked out by some of the local medical associations in Iowa were used as patterns in many parts of the United States in solving this vital emergency problem.

Public health nursing and the problems of epidemic control as well as controls of insidious diseases have been approached and enlarged; it has always been a source of great pride to me personally

that, when the unexpected flash floods of year before last devastated central Iowa and destroyed sanitary systems in various communities, the incidence of typhoid and other diseases which normally follow such catastrophes was held at an unbelievably low minimum, due to the intelligent emergency work of our Iowa Department of Health and the local physicians of the communities affected.

Of course, there is no group closely affecting the public that is not from time to time accused by some of selfish motives, but I submit that the evidence overwhelmingly proves the medical profession of Iowa has moved forward in a public-spirited manner and has made much progress in the assumption and discharge of its public responsibilities, and that there has been a minimum of selfishness in its activities. Of course, you have tried to keep medicine and the treatment of disease free; you have tried to keep the practice as a private activity, because you, better than anyone else, know the deterioration of incentive and technical skill which is bound to follow and always has followed the establishment of state controlled and state dictated medical practice and procedure. And, of course, you have fought mightily for the preservation of the responsibility and the progress of one of the greatest professions of mankind.

The medical profession today faces one of its crucial tests, but it does not face this test alone. The public itself has a more vital stake in the problems confronting us in the field of public health and social problems. I say the public has the greatest stake because, in the long run, it will be the general public more than the professional man as an individual that will suffer or benefit by proposals or programs which may be put into effect. It will be the public that will benefit from a free, stimulated, and progressive approach to sickness and health, or it will be the public that will suffer from a submerged, controlled and stereotyped treatment of public ailments by a regimented and circumscribed medicine.

As may be expected, the war and this period of postwar conversion pose countless problems. These problems are social as well as economic and are often confused in the restlessness resulting from the tremendous desire on the part of everyone to be relieved of the tension of war and to get back to the calmer pursuits of peace. It is during such a period that emotions run high, that ideas flow from fertile brains in great volume, offering plausible solutions for difficulties which manifestly need attention; but, by the same token, it is during such periods of confusion that seemingly plausible solutions may be adopted without



proper analysis or without calm consideration of their ultimate results. In such circumstances we are often led to accept the tinsel for the gold and to find, when the glittering stage settings are taken away, there remains nothing of the illusion they created.

We have a great tendency, when we talk about matters involving social security, to confuse or to unite security with freedom and to consider them as synonymous. They, of course, are not synonymous, and when security is had as a result of government paternalism, it results in a corresponding reduction of the fundamental freedom of the individual. A good illustration is the case of the slave who works for a paternalistic master who provides him food and shelter and a reasonable assurance of living out his life in modest comfort. He has security but no freedom; his independence is gone, and the stimulus for his own personal progress is non-existent.

As paternalistic governmental security increases in scope and extends itself to more and more segments of our society, those segments in turn give up their latitude of action and freedom of choice, and much of the incentive which stimulates people to assume their own responsibilities. Government paternalism means government dictation and rule; it means government control; and, as it extends its scope, the control and regimentation extend and the individual finds himself accepting paternalism in more and more fields of his normal freedom and being hedged about in proportion by rote, rule, and regulation which he must not transgress without losing the enervating security which he has come to lean upon.

There is a movement in this country, on the part of some, to substitute entirely paternalistic controls by government which mean dictation and regulation of all the major phases of our society by centralized government in Washington for the system of individual responsibility commonly referred to as free enterprise.

High sounding slogans are mouthed and high sounding purposes are announced, all of which are intriguing to many people who do not read the detailed proposals that are made in support of these slogans. We are in the very midst of such a period now, and only the calm and sensible consideration by the public, in its own interest, will secure the adoption of sound and progressive laws and policies affecting the public interest and eliminate the programs which will, in fact, be destructive of the very freedoms and responsibilities which have made America great and which must be retained if America is to stay great.

I did not intend this discussion to be devoted

entirely to general philosophy; on the contrary, I was asked to give a short discussion of some of the legislation and proposals in various social security programs affecting public health and, therefore, affecting the matters in which you are primarily interested. I think it is well, however, to preface any discussion by some statement of over-all policy.

We are all aware of the fact that there has been a growing realization of the need for health services throughout our entire society. Those of means can secure adequate service, but often, through lack of proper educational programs, they may not avail themselves of it. Those with little or no means have in the past experienced varying degrees of difficulty in securing even the absolutely necessary attention and, in many cases and in many areas, have not had the benefit of general attention and services which would be in fact desirable and beneficial.

For many years there has been a growing development of health services in all sections of the nation. Some areas have gone further than others; nevertheless, any comparison of the present time with the period fifty years ago will show great advancement indeed, but still there is the continuing need for better and better medical and health facilities to more and more of our people. This gives rise to the many proposals that have sprung up, and we see these proposals reflected in local programs and in legislation.

At the present time there are a number of bills on public health before the Congress that should be given serious study and consideration by the people; and they should be examined in their details rather than in any summary or digest which may be scattered broadcast over the country by the proponents.

Among these bills are two so-called Wagner-Murray bills. One is S. 1050, filed on May 24, 1945, and the other and later one is S. 1606 filed November 19, 1945. A third bill passed by the Senate December 11, 1945, and sent to the House of Representatives is S. 191, and I would like to mention this bill briefly before discussing the other two bills to which I referred.

S. 191 is an amendment to the Public Health Service Act authorizing grants to states to survey their hospital and public health centers, and for the construction and aid in either building or improving hospitals and public health centers, with special emphasis on the rural or sparsely settled districts of the United States.

This bill, in the main, is a constructive bill in my judgment, because it will stimulate the improvement of existing hospitals and will stimulate

the construction of adequate hospitals in local communities under local authority and management, and will go far, I believe, toward bringing more adequate means of treating public health in areas that are now deficient in such means. In other words, this is a bill placing the aid of public health upon the basis of local responsibility and leaves the control in this field of aid and stimulus where it should be, in the hands of the people themselves. This bill makes allocations for surveys and for aid in the construction of hospital and public health facilities, but it retains and encourages the control and independence of the states and of local communities in meeting their own problems. It has a minimum of federal control and supervision and, considering the fact that certain federal moneys are available for the various projects, it reduces to a reasonable minimum the federal dominion over these local institutions.

The Surgeon General who has charge of general public health has certain rather broad powers, but the emphasis is put upon local responsibility. I believe that when S. 191 is enacted into law, if it retains its present features, it will be a progressive piece of legislation, and will be in keeping with our responsibilities and the advancement of medical science, and will actually bring far-reaching help to the country. I presume that your various local societies have thoroughly discussed the details of this bill, and I am sure that medical groups throughout the United States are in substantial approval of its terms.

If I may refer to the other two pieces of legislation, however, S. 1050 and S. 1606, I should like to point out some very potent dangers in these two bills. In the first place, S. 1050 was a bill filed last May as an amendment to the Public Health Service Act and consisted of 185 pages of additions to the Public Health Service Act, encompassing a vast field of social as well as public health controls. The general effect of this far-reaching bill would be to place almost every phase of social as well as public health matters under the thumb and control of the Federal Social Security Board.

In my opinion, it would be the most far-reaching regimentation law that we have yet experienced and would amount to a practical socialization of not only the economic lives of a great percentage of our people, but it would, through its establishment of federal medicine, set up controls over the health and lives of our people to a degree that is unthinkable.

Like so much legislation that is proposed by those who would establish political controls over our economy, the bill devotes a small portion of its provisions to the problems of public health, but

a major portion of its provisions actually apply to political controls. It makes the public health section of the Federal Government subordinate to the Social Security Board, and it sets up a tremendous organization, the administration and other costs of which have been estimated by Senator Wagner, one of the authors, to be \$11,625,000,000, and by Gerald Hershfield, author of "Social Security Tomorrow," at \$14,625,000,000. Other authorities estimate from \$11,787,000,000 to \$13,405,000,000. And any authority who attempts to speak in factual language, I believe, will say that that is only a wild estimate, and that no one can tell the implications and the cost of the proposals under this bill. In any event, the cost, including compulsory insurance features, administration, and general operation would be somewhere between twelve and fourteen billions of dollars per year. The additional government personnel necessary to operate such a system is conservatively estimated to be at least one million five hundred thousand people, in addition to the present three million public employees we have on the federal payroll. It is claimed that the bill would force into a compulsory health insurance program by way of taxation, payroll deductions, and otherwise, at least 85 per cent of the entire population of our country. It reasonably follows that, almost without exception, 100 per cent of the physicians of the country, of all kinds, would be forced into government employment or be forced to abandon their practice.

Lip service is given to the fact that the bill provides any person may select a physician of his choice and physicians may practice privately without the system, but the actual, resulting circumstances are not only recognized but asserted by the International Labor Office in a recently published volume entitled "Approaches to Social Security." I ask that you pay close attention to the statement of objectives of those who, in broad gauge, have sponsored this legislation in many places in the world. They say in this book, and I am quoting: "The fact is that once the whole employed population, wives and children included, is brought within the scope of compulsory sickness insurance, the great majority of doctors, dentists, nurses, and hospitals find themselves engaged in the insurance medical service, which squeezes out most of the private practice on the one hand, and most of the medical care hitherto given by the public assistance authorities, on the other. The next step to a single national medical service is a short one . . ."

There you have it, the real objectives of this comprehensive over-all program. Those who study this measure fully realize that, once this all-



inclusive social and health control measure has been impressed upon the American people, it will be a long step toward full economic socialization of our system.

This bill S. 1050, however, has not met with sufficient approval to be encouraging to its sponsors. Consequently, a second bill, S. 1606, was prepared, reduced somewhat in scope and placing greater emphasis on grants in aid, child and maternity welfare and services, apparently with the hope that this piece-meal approach to the entire ambition of S. 1050 might be adopted.

This latter bill is divided into two sections, called Title I and Title II. Title I is devoted to grants to states for public health services, for maternal and child health services, and for crippled children. It makes some expression with regard to state aid, state planning, the operation and administration of programs by the states, and provides for studies, investigations and reports. It also includes provision for aid to states for the care of needy persons, and so far as over-all objectives are concerned, Title I of this bill has worthy provisions. I may say at this point that there are certain provisions of restrictive control and direction which I would not include in Title I if I were writing it, but I might say Title I of this bill, if taken alone, is far less objectionable and has more to speak in its favor than much legislation.

Title II, however, goes further than sound aid to states and, in effect, retains or attains the complete control over all of these activities actually in the Social Security Board of the Federal Government, acting through the Surgeon General whom the Social Security Board controls.

Title II of S. 1606 is the socialized medicine section of the bill and sets up the extensive provisions for compulsory health insurance and for the regimentation and socialization of medicine in the United States. These two titles have been, in effect, lifted out of S. 1050, but actually contain the same provisions and, in so far as they go, have the same far-reaching effects as S. 1050. The latter bill, in Title II, would include in the compulsory health insurance program 80 to 90 per cent of all the people in the country and would, as its predecessor, force the medical personnel of the nation to become participants upon terms and conditions to be fixed from time to time by political authority, and medicine would be practiced in this country according to government directive and changing decree.

Again, this bill would require approximately a million and a half federal, state, and local employees to administer the system.

One must live in a medical district, and while he might secure the physician of his choice there, yet if he moves over the line into another district, he must accept such medical treatment and services as that district provides. The income of the physician would eventually gravitate not in accordance with the skill of his services but, if we can believe the experiences in other nations that have tried this scheme, the poor physician and the unskilled would receive about the same compensation as the more skilled practitioner. The real program of this philosophy is actually to place the physician on a fixed income in various categories without regard—perhaps I should say without *due* regard—to the individual skill or zeal which he may possess.

As I said before, the proposed bill carries with it a comprehensive control by the Social Security Board over greatly enlarged fields of our system, and seems to be definitely reaching for additional power by this centralized body. It does not separate the Surgeon General's Office or establish the Public Health Department as an independent agency for the purpose of supervising health, but makes it a subordinate section of this broad social program. We have only to look to the experience of Great Britain under British National Health Acts for an example of what we might reasonably expect under such a program. I am informed that in Great Britain only 40 per cent of the population is insured for medical benefits. This means approximately sixteen million people; whereas, in this country, if 80 per cent of the people are brought within the system it would mean some one hundred twelve million people. Britain has a fairly consistent pattern of administration because of her congestion and small area, but here we have great sectional influences and, in fact, great sectional differences. The Office Manual of the British Physician, issued by the government and required to be ministered by him, contains over 350 pages of rules, regulations and outlined procedure, while the book containing the National Health Insurance Acts, together with the statutory rules and the decisions of the Minister of Health, is about thirteen hundred pages. These are the manuals and guides of the physician in practice there under the federalized public health program. With our known propensity for issuing rules, regulations and manifestoes by our present bureaucracy, we may be certain that we would let nothing stand in our way to exceed by far the number and ramification of regulations and directives over any other country. Bureaucratic pride would stand for no less.

Increased attention to public health, the treat-

ment of disease, and the most extensive development of science and research are the mark of a progressive social order, and I am certain there is no disposition on the part of any thinking person to block or stand in the way of such progress. I think our private institutions and public research have done extensive work along these lines, and I would not say for a moment that there are not greater fields of research and service to the people that can and will be developed through governmental aid, state and national. While private foundations and private research have made great strides in cancer, tuberculosis and other fields, everyone realizes that the surface, perhaps, has not been scratched, and that the possibilities of continued and increased help to humanity are even greater than in imagination. In addition to the present known fields of research, we have the new and undeveloped field of the atom which gives great hope, indeed, for finding the answers to many of the imponderables of medical and health science. Many of these fields require governmental control and dictation. Experience in the past has amply taught us that only through the exercise of individual genius with freedom to act have we made some of the greatest discoveries and advancements.

The very fact that tremendous demands are being made to meet deficiencies in our public health programs and to bring better medical and health programs to underprivileged people indicates there is a need and a field in which we should not only give every consideration, but should act with judgment and with speed. While I am opposed to the over-all socialization of our health programs, and I am especially opposed to the socialization of medicine because I believe such philosophies destroy initiative and encourage indolence and thereby become detrimental in the long run to the public, nevertheless the problem must be solved.

I think it is being rapidly solved in the American way although not so rapidly as the planners desire, but I believe it is being solved through the development and establishment of private associations and private groups through health and hospital insurance and, I hope, medical insurance. At the risk of repetition later, may I assure you that I believe these programs, looking to the discharge of responsibility for the health needs of the individual, must be met and methods devised so that the individual can carry his equitable share of that responsibility and not look to a paternalistic government or a paternalistic group to give it to him for nothing.

These programs must, of course, provide insurance or fee services at a price within the economic reach of each class of individual, and they are so

provided in many places. Such programs, however, must come from practical and trained people in the professions and the services themselves, people who know the problems intimately and who are best qualified to give the answer. I know criticism has been made that the medical profession has not moved with any alacrity along this line, but I think that is not true. I think there is ample evidence in communities and localities all over this country that the medical men of the nation do realize this problem and are working out plans of self-help for their communities and for their states, whereby individuals can secure the best of services at a price that can be paid. It has always been my opinion that it is better for a person of low income to have an arrangement whereby he can pay a modest fee, proportionate to his income or ability, and pay the debt or the obligation himself, retaining his own pride in meeting his debts and taking care of himself and his family, than it is to provide such services by way of governmental donation or public or private charity. And may I say that much of the private charity in that field is furnished by the individual physician himself in the number of patients whom he treats without pay under the present generalized system of treatment. In the first instance, where an individual can, through his own efforts, discharge his obligations, he has the sense and feeling of a free and individually responsible person; his pride is retained and his ability to look the world in the face gives him courage. On the other hand, if he becomes accustomed to receiving charity, public or private, his individual pride suffers and he is often about to become a dependent person. The problem posed is great, but it is more than a problem; it is a challenge to the ingenuity of a great profession and a challenge to the maintenance of the responsibilities of a free system. No one can argue against the need for full health service to all segments of our people. No one can argue against the benefits to society and the future of our country providing that, in our emotional approval and in our efforts to obtain these physical objectives, we do not lose sight of the fundamental principles of progress which are so closely dependent upon individual responsibility.

I know that a great part of your deliberations, both here and in your local communities, is devoted to this very subject, and that you are constantly at work to solve this problem in the free American way. I know also that you have made progress, and I know that there are fields in which government must aid and help, but the thing to keep ever in mind is that in aiding and helping,



# Roster of Iowa Physicians in Military Service

As of May 22, 1946

## Appauoose County

Condon, F. J., Centerville (Owensboro, Ky.)...Major, U.S.P.H.S.

## Bentou County

Senfeld, Sidney, Belle Plaine

## Black Hawk County

Marquis, F. M., Waterloo (San Antonio, Texas)....Capt., A.U.S.

## Boone County

Brewster, E. S., Boone (APO 254, New York, N. Y.)...Major, A.U.S.

## Buena Vista County

Witte, H. J., Marathon (APO 350, New York, N. Y.).....Major, A.U.S.

## Butler County

James, R. A., Allison (Mare Island, Cal.)

## Carroll County

Freedland, Maurice, Coon Rapids  
Scannell, R. C., Carroll (Denver, Colo.).....Capt., A.U.S.

## Cass County

Schiff, Joseph, Anita (Walla Walla, Wash.).....Capt., A.U.S.

## Cerro Gordo County

Fitzpatrick, M. R., Mason City (Ft. Dix, N. J.)...1st Lt., A.U.S.  
Harris, R. H., Mason City (Cando, N. Dak.).....Major, A.U.S.  
†Harrison, G. E., Mason City.....Col., A.U.S.  
Mullen, L. M., Mason City (Kansas City, Mo.)....Capt., A.U.S.  
Tice, G. I., Mason City (Mare Island, Cal.).....Lt., U.S.N.R.  
Tice, W. A., Mason City (Jacksonville, Fla.)...Lt. (jg), U.S.N.R.

## Cherokee County

George, L. A., Cherokee.....A.U.S.

## Clayton County

Glesne, O. G., Monona (Knoxville, Iowa).....Capt., A.U.S.

## Clinton County

O'Donnell, J. E., Clinton.....Lt., U.S.N.R.  
Speigel, I. J., Clinton (Galesburg, Ill.).....Capt., A.U.S.  
Wells, L. L., Clinton.....Capt., A.U.S.

## Dallas-Guthrie Counties

Butterfield, E. T., Dallas Center (Springfield, Mo.) Capt., A.U.S.  
Byrnes, A. W., Guthrie Center (Fort Custer, Mich.)...Major, A.U.S.

## Delaware County

Baumgarten, Oscar, Earlville.....Capt., A.U.S.

## Des Moines County

Eigenfeld, M. L., Burlington (Cleveland, Ohio)....1st Lt., A.U.S.  
Sage, E. C., Burlington (Fleet PO, San Francisco, Cal.).....Lt. Comdr., U.S.N.R.

## Dubuque County

Anderson, E. E., Dubuque (Bradley Field, Conn.)...Capt., A.U.S.  
Cunningham, J. C., Dubuque (Fairfield, Ohio)....Capt., A.U.S.  
Edstrom, Henry, Dubuque (Galesburg, Ill.)....Lt. Col., A.U.S.  
†Hall, C. B., Dubuque.....Capt., A.U.S.  
Lavery, H. B., Dubuque (Washington, D. C.)....Lt. Col., A.U.S.  
Leik, D. W., Dubuque (Wichita Falls, Tex.)....Capt., A.U.S.  
Mueller, J. J., Dubuque (APO 230, New York, N. Y.)...Capt., A.U.S.  
Painter, R. C., Dubuque (Cheyenne, Wyo.)...Lt. Comdr., U.S.N.R.

## Fayette County

Sulzbach, J. F., Oelwein  
Walsh, E. L., Hawkeye (Huntington, W. Va.).....A.U.S.  
Walsh, W. E., Hawkeye (Cleveland, Ohio)....Comdr., U.S.N.R.

## Floyd County

Huber, R. H., Charles City.....1st Lt., A.U.S.  
Mackie, D. G., Charles City (Danville, Ind.)....Capt., A.U.S.  
Magdick, Carl, Charles City (Green Cove Springs, Fla.).....Lt., U.S.N.R.

## Franklin County

Hedgecock, L. E., Hampton (Camp Lejeune, N. Car.).....Comdr., U.S.N.R.

## Greene County

Cartwright, F. P., Grand Junction (Colorado Springs, Colo.).....Capt., A.U.S.

## Hamilton County

Mooney, F. P., Jewell.....Capt., A.U.S.  
Schradar, M. A., Webster City (Topeka, Kan.)....1st Lt., A.U.S.

## Henry County

Cogan, Samuel, Mt. Pleasant  
Dwankowski, Carl, Mt. Pleasant (APO 511, New York, N. Y.).....Major, A.U.S.  
Ristine, L. P., Mt. Pleasant (Denver, Colo.)....Major, A.U.S.

## Iowa County

Geiger, U. S., North English (Kansas City, Mo.).....Lt. Comdr., U.S.N.R.

## Jackson County

Skelleby, P. B., Jr., Maquoketa (APO 247, San Francisco, Cal.).....1st Lt., A.U.S.

## Jefferson County

Frey, Harry, Fairfield (Norfolk, Va.).....Comdr., U.S.N.R.  
Grabner, H. E., Fairfield.....Lt. Col., A.U.S.  
Taylor, I. C., Fairfield (Washington, D. C.)....1st Lt., A.U.S.

## Johnson County

Albert, S. M., Iowa City.....Capt., A.U.S.  
Bunge, R. G., Iowa City (Orlando, Fla.).....Capt., A.U.S.  
Cobb, E. A., Iowa City (APO 14987, San Francisco, Cal.).....1st Lt., A.U.S.  
Coburn, F. E., Iowa City (Toronto, Canada)....Capt., R.C.A.  
Crowell, E. A., Iowa City (Ft. Geo. Wright, Wash.)...Capt., A.U.S.  
Evers, L. B., Iowa City.....Capt., A.U.S.  
Flax, Ellis, Iowa City.....1st Lt., A.U.S.  
Francis, N. L., Iowa City (Annapolis, Md.)...Lt. (jg), U.S.N.R.  
Hartung, Walter, Iowa City (Springfield, Mo.)...Major, A.U.S.  
Hessin, A. L., Iowa City (APO 469, New York, N. Y.).....Major, A.U.S.  
January, L. E., Iowa City (Monahans, Texas)....Major, A.U.S.  
Keislar, H. D., Iowa City (Washington, D. C.)....Capt., A.U.S.  
Laubscher, J. H., Iowa City (Ft. Benning, Ga.)....1st Lt., A.U.S.  
Moreland, F. B., Iowa City (Maxwell Field, Ala.)...1st Lt., A.U.S.  
Ringrose, E. J., Iowa City  
Sells, R. L., Jr., Iowa City (Palmdale, Cal.)....Capt., A.U.S.  
†Springer, E. W., Iowa City (APO 678, New York, N. Y.).....Capt., A.U.S.  
Stump, R. B., Iowa City (Denver, Colo.)....Capt., A.U.S.  
Titus, E. L., Iowa City (Los Angeles, Cal.)....Col., A.U.S.  
Trapasso, T. J., Iowa City (APO 520, New York, N. Y.).....Capt., A.U.S.  
Vander Laan, C. A., Iowa City.....Major, A.U.S.  
Voelker, C. A., Jr., Iowa City.....Capt., A.U.S.  
Weatherly, H. E., Iowa City.....Major, A.U.S.  
Weih, J. E., Iowa City.....A.U.S.  
Wollmann, W. W., Iowa City (Martinsburg, W. Va.).....Capt., A.U.S.

## Junior Members

†Adams, M. P., Iowa City (Fleet PO, San Francisco, Cal.).....Lt. (jg), U.S.N.R.  
Ahrens, J. H., Iowa City (APO San Francisco, Cal.)....A.U.S.  
Ball, A. L., Iowa City (Camp Polk, La.).....Major, A.U.S.  
Barrent, M. E., Iowa City (Camp Tyson, Tenn.)...Capt., A.U.S.  
Blair, J. D., Iowa City (APO San Francisco, Cal.)...Major, A.U.S.  
Boyd, R. J., Iowa City (Spokane, Wash.).....Capt., A.U.S.  
Brintnall, E. S., Iowa City (APO New York, N. Y.)...Major, A.U.S.  
Burr, S. P., Iowa City (APO San Francisco, Cal.)...1st Lt., A.U.S.  
Carney, R. G., Iowa City (Fleet PO, San Francisco, Cal.).....Lt., U.S.N.R.  
Couch, O. A., Iowa City (Camp Van Dorn, Miss.)...1st Lt., A.U.S.  
Freiberg, M., Iowa City (Jefferson Barracks, Mo.)....A.U.S.  
Hamilton, H. E., Iowa City (Chicago, Ill.).....1st Lt., A.U.S.  
Hendricks, A. B., Iowa City (Fleet PO, San Francisco, Cal.).....Lt. Comdr., U.S.N.  
Hovis, Wm., Iowa City (Fleet PO, San Francisco, Cal.).....Lt. (jg), U.S.N.R.  
Kaplan, Nathan, Iowa City (Carlisle Barracks, Pa.).....1st Lt., A.U.S.  
Keil, P. G., Iowa City (Sioux City, Iowa).....1st Lt., A.U.S.  
Keleher, M. F., Iowa City (Great Lakes, Ill.)...Lt. (jg), U.S.N.R.  
McCann, J. P., Iowa City (Carlisle Barracks, Penn.).....1st Lt., A.U.S.  
Moon, B. H., Iowa City (APO 755, New York, N. Y.).....Capt., A.U.S.  
Moon, R. E., Iowa City (APO New York, N. Y.)....1st Lt., A.U.S.  
Odell, Lester, Iowa City (Pensacola, Fla.)....Lt. (jg), U.S.N.R.  
Phillips, R. M., Iowa City (San Francisco, Cal.)...1st Lt., A.U.S.  
Randall, R. G., Iowa City (Waterloo, Iowa)....Capt., A.U.S.  
Rosenbusch, M., Iowa City (Fort Leonard Wood, Mo.).....1st Lt., A.U.S.  
Russell, L. A., Iowa City (Fort Blanding, Fla.)....Capt., A.U.S.  
Sawtelle, W. W., Iowa City.....Lt., U.S.N.R.  
Shand, J. A., Iowa City (Carlisle Barracks, Penn.).....1st Lt., A.U.S.  
Shapiro, S. I., Iowa City  
Skewis, J. E., Iowa City (Corona, Cal.)....Lt. Comdr., U.S.N.R.  
Skouge, O. T., Iowa City  
Watters, V. G., Iowa City (Fort Leonard Wood, Mo.).....1st Lt., A.U.S.  
Wicks, W. J., Iowa City (Camp Crowder, Mo.)....Capt., A.U.S.

Williams, L. A., Iowa City (Treasure Island, Cal.)...1st Lt., A.U.S.  
 Willumsen, H. C., Iowa City (Denver, Colo.)...Capt., A.U.S.  
 Yetter, W. L., Iowa City (APO New York, N. Y.)...Major, A.U.S.  
 Zahrt, N. E., Iowa City (Keesler Field, Miss.)...Capt., A.U.S.  
 Zimmerman, H. A., Iowa City (Santa Ana, Cal.)...1st Lt., A.U.S.

#### Keokuk County

Engelmann, A. T., What Cheer (Camp Polk, La.)...Capt., A.U.S.

#### Kossuth County

Corbin, R. L., Luvern  (Des Moines, Iowa).....Capt., A.U.S.

#### Lee County

Younan, Thomas, Ft. Madison.....Capt., A.U.S.

#### Linn County

Coughlan, V. H., Coggon (Fort Snelling, Minn.).....A.U.S.  
 Leedham, C. L., Springfield (Hot Springs, Ark.)...Col., A.U.S.  
 †MacDougal, R. F., Cedar Rapids (APO 9057, New York,  
 N. Y.).....Capt., A.U.S.  
 Noble, W. C., Cedar Rapids (Camp San Luis Obispo,  
 Cal.).....1st Lt., A.U.S.  
 Noe, C. A., Cedar Rapids (Hot Springs, Ark.)...Major, A.U.S.  
 Smrha, J. A., Cedar Rapids (Denver, Colo.).....Capt., A.U.S.  
 Yavorsky, W. D., Cedar Rapids (Fleet PO, San Francisco,  
 Cal.).....Comdr., U.S.N.

#### Lyon County

Moriarity, F. J., Rock Rapids (Corvallis, Ore.)...Capt., A.U.S.

#### Mahaska County

Bos, H. C., Oskaloosa.....Major, A.U.S.  
 Gillett, R. M., Oskaloosa (Fleet PO, San Francisco,  
 Cal.).....Capt. U.S.N.

#### Marion County

Gray, J. F., Jr., Melcher (Hattiesburg, Miss.)...Capt., A.U.S.  
 Schiek, C. M., Knoxville.....Lt. Comdr., U.S.N.R.

#### Mills County

Kuitert, J. H., Glenwood (Denver, Colo.).....Major, A.U.S.

#### Mitchell County

Owen, W. E., Osage (San Diego, Cal.).....Lt., U.S.N.

#### Monona County

†Harlan, M. E., Onawa (Fleet PO, San Francisco,  
 Cal.).....Lt. (jg), U.S.N.R.

#### Monroe County

Bay, F. N., Albia.....Lt. Comdr., U.S.N.R.  
 Gilliland, C. H., Albia (Fleet PO, San Francisco,  
 Cal.).....Lt. Comdr., U.S.N.  
 Morrissey, W. J., Lovilia (Ft. Sam Houston, Texas) 1st Lt., A.U.S.

#### Montgomery County

Panzer, E. J. C., Stanton (Point Montara, Cal.)...Lt., U.S.N.R.

#### Muscataine County

Kimball, J. E., Jr., West Liberty.....Major, A.U.S.  
 Norem, Walter, Muscatine (APO, Miami, Fla.)...Capt., A.U.S.

#### Page County

Bauer, Frank, Shenandoah (APO New York, N. Y.)...A.U.S.  
 Brush, Frederick, Shenandoah (APO New York, N. Y.)...A.U.S.  
 Burdick, F. D., Shenandoah (Denver, Colo.)...Major, A.U.S.  
 Schwidde, Tilford, Shenandoah (APO New York, N. Y.)...A.U.S.

#### Polk County

Bender, H. R., Des Moines (Carlisle Barracks,  
 Penn.).....1st Lt., A.U.S.  
 Bruner, J. M., Des Moines (El Paso, Texas).....Lt. Col., A.U.S.  
 Bruns, P. D., Des Moines (Carlisle Barracks,  
 Penn.).....1st Lt., A.U.S.  
 Downing, A. H., Des Moines (Springfield, Mo.)...Capt., A.U.S.  
 Ervin, L. J., Des Moines.....Lt. Col., A.U.S.  
 Fleck, W. L., Des Moines (Ft. Howard, Md.)...Lt. Col., A.U.S.  
 Fried, David, Des Moines (Carlisle Barracks,  
 Penn.).....1st Lt., A.U.S.  
 Fracasse, John, Des Moines.....1st Lt., A.U.S.  
 Gerchek, E. W., Des Moines.....U.S.P.H.S.  
 Harris, H. L., Des Moines (Salina, Kan.).....Capt., A.U.S.  
 Kirch, W. A. W., Des Moines (Astoria, Ore.)...Lt. Comdr., U.S.N.R.  
 Landis, S. N., Des Moines (West Palm Beach,  
 Fla.).....1st Lt., A.U.S.  
 La Tona, Salvatore, Des Moines.....1st Lt., A.U.S.  
 Lederman, James, Des Moines.....1st Lt., R.C.A.  
 Losh, C. W., Jr., Des Moines.....Capt., A.U.S.  
 Maloney, P. J., Des Moines.....Capt., A.U.S.  
 Martin, L. E., Des Moines (Helena, Ark.).....1st Lt., A.U.S.  
 Matheson, J. H., Des Moines (Fleet PO, San  
 Francisco, Cal.).....Lt. Comdr., U.S.N.R.  
 McDonald, D. J., Des Moines.....Major, A.U.S.  
 Mencher, E. W., Des Moines.....1st Lt., A.U.S.  
 Montgomery, S. A., Des Moines (Carlisle Barracks,  
 Pa.).....Capt., A.U.S.  
 †Morden, R. P., Des Moines (APO 635, New York,  
 N. Y.).....Capt., A.U.S.  
 Mumma, C. S., Des Moines (Los Angeles, Cal.)...Major, A.U.S.  
 Nourse, M. H., Des Moines (Fleet PO, New York,  
 N. Y.).....Lt. Comdr., U.S.N.  
 Overton, L. M., Des Moines.....Lt. Comdr., U.S.N.R.  
 Patton, B. W., Des Moines (Camp Robinson,  
 Ark.).....1st Lt., A.U.S.

Schlaser, V. L., Des Moines (Fleet PO, New  
 York, N. Y.).....Lt. Comdr., U.S.N.  
 Singer, P. L., Des Moines (Camp Grant, Ill.)...1st Lt., A.U.S.  
 †Snodgrass, R. W., Des Moines (APO 9528, New York,  
 N. Y.).....Capt., A.U.S.  
 Sorensen, R. M., Des Moines (Topeka, Kan.)...Lt. Col., U.S.P.H.S.  
 Stitt, P. L., Des Moines (Seattle, Wash.)...Lt. (jg), U.S.N.R.  
 Updegraff, Thomas, Des Moines (APO San Fran-  
 cisco, Cal.).....Capt., A.U.S.  
 Van Hale, L. A., Des Moines (Denver, Colo.)...Major, A.U.S.  
 Wagner, E. C., Des Moines (APO 1009, San Fran-  
 cisco, Cal.).....Capt., A.U.S.

#### Pottawattamie County

Kurth, C. J., Council Bluffs (Wichita, Kan.)...Major, A.U.S.  
 Mathiasen, J. W., Council Bluffs (APO 239,  
 San Francisco, Cal.).....Capt., A.U.S.  
 Wurl, O. A., Council Bluffs (New Orleans, La.)...Lt. Col., A.U.S.

#### Scott County

†Baker, R. W., Davenport (APO 511, New York,  
 N. Y.).....Capt., A.U.S.  
 Boyer, U. S., Davenport (Rock Island, Ill.)...Lt. Col., A.U.S.  
 Carey, E. T., Davenport.....1st Lt., A.U.S.  
 Coleman, Tom, Davenport (APO 230, New York,  
 N. Y.).....Capt., A.U.S.  
 Evans, H. J., Davenport (Daytona Beach, Fla.)...Capt., A.U.S.  
 Hurteau, Everett, Davenport (APO 647, New York,  
 N. Y.).....Capt., A.U.S.  
 Hurteau, W. W., Davenport (Camp Berkeley,  
 Texas).....Major, A.U.S.  
 Krakauer, Max, Davenport (APO 102, New York,  
 N. Y.).....Major, A.U.S.  
 Kuhl, A. B., Jr., Davenport (Ft. Meade, Md.)...Major, A.U.S.  
 Perkins, R. M., Davenport (APO 121B, New York,  
 N. Y.).....Capt., A.U.S.  
 Rendleman, Hugh, Davenport (Fleet PO, San  
 Francisco, Cal.).....Lt. (jg), U.S.N.R.  
 Sheeler, I. H., Davenport (APO 350, New York,  
 N. Y.).....Capt., A.U.S.

#### Sioux County

Gleysteen, R. R., Alton (Palo Alto, Cal.).....Comdr., U.S.N.  
 Oelrich, C. D., Sioux Center (Buckley Field, Colo.)...Capt., A.U.S.

#### Wapello County

Brentan, Emanuel, Ottumwa (Camp Carson, Colo.)...Capt., A.U.S.  
 Howell, H. P., Ottumwa (Oakland, Cal.).....Major, A.U.S.  
 Struble, G. C., Ottumwa (Cleveland, Ohio).....Lt. Col., A.U.S.

#### Washington County

Boice, C. L., Washington (Oakland, Cal.)...Lt. Comdr., U.S.N.  
 Droz, A. K., Washington (Long Beach, Cal.)...Comdr., U.S.N.R.  
 Stutsman, R. E., Washington (Patuxent River,  
 Md.).....Lt., U.S.N.R.

#### Webster County

Burleson, M. W., Fort Dodge (Pasadena, Cal.)...Capt., A.U.S.  
 †Thatcher, O. D., Fort Dodge (APO 634, New York,  
 N. Y.).....Capt., A.U.S.

#### Woodbury County

Cowan, J. A., Sioux City (Lansing, Mich.)...Major, U.S.P.H.S.  
 Crowder, R. E., Sioux City (Kansas City,  
 Mo.).....Lt. Comdr., U.S.N.R.  
 Heffernan, C. E., Sioux City.....Capt., A.U.S.  
 Knott, P. D., Sioux City.....Capt., A.U.S.  
 Simonsen, Marie N., Sioux City (Philadelphia, Pa.)...Lt., U.S.N.R.

#### Worth County

Sheimo, S. L., Northwood (San Diego, Cal.)...Lt. (jg), U.S.N.R.

#### Wright County

Doles, E. A., Clarion (Spokane, Wash.).....Capt., A.U.S.

(\*) Reported missing in action.  
 (†) Reported deceased in service.  
 (‡) Reported prisoner of war.

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# WOMAN'S AUXILIARY NEWS

MRS. KEITH M. CHAPLER, *Chairman of Press and Publicity Committee*, Dexter, Iowa

*President*—MRS. MARION H. BRINKER, Jefferson

*President-Elect*—MRS. FRED MOORE, Des Moines

*Secretary*—MRS. CHARLES A. NICOLL, Panora

*Treasurer*—MRS. HENRY G. DECKER, Des Moines

## CONVENTION NOTES

The seventeenth annual meeting of the Woman's Auxiliary to the Iowa State Medical Society was held at Hotel Kirkwood in Des Moines, April 17 and 18, 1946, with Mrs. S. S. Westly of Manly, President, presiding.

Mrs. H. C. Black of Des Moines gave the invocation. Mrs. George H. Watters, Des Moines, President of the Polk County Woman's Auxiliary, welcomed the convention. Mrs. M. H. Brinker, President-Elect of the Woman's Auxiliary to the Iowa State Medical Society, responded.

Minutes of the last meeting were read and approved. There are 17 county auxiliaries in the state with a membership of 321, and there are 97 members at large, making a total of 418 members. There are 143 new and 50 delinquent members. Annual reports of state officers, chairmen, and presidents of county auxiliaries were read at the pre-convention meeting Wednesday afternoon. All of these reports will appear at a later date in the "Woman's Auxiliary News."

Mrs. J. A. Downing, assisted by Mrs. Westly and Mrs. Brinker, presented a beautiful memorial tribute to deceased members.

Mrs. Westly read an account of her year's activities as president of the Woman's Auxiliary to the Iowa State Medical Society.

Mrs. M. H. Brinker, President-Elect, presented objectives for the coming year, stressing the need for an active program in which all auxiliaries in the state may participate. She particularly emphasized state aid for handicapped children and the cancer control program.

Mrs. Dorothy Phillips, Executive Secretary of the Iowa Society for Crippled Children, gave a vital address on the needs of the handicapped children in Iowa. She defined "handicaps" as those who are physically or mentally retarded, or those who have special learning or behavior difficulties. The \$60,000 appropriated by the State Legislature last year is less than Des Moines spends for special education. Those who have had experience with handicaps believe that there should be no ceiling on state aid, for in the long run the taxpayer saves when handicaps are cared for sanely and kindly—when they lose inferiority complexes—and when they learn better manipulation and vocations by which they eventually support themselves. The recommendation is that there be a future goal of a special state school for handicaps with teachers who have had specific

training in caring for and teaching spastic individuals, and those with muscular dystrophy and orthopedic difficulties. The experimental school for spastics at the University Church of Christ in Des Moines has been doing commendable work, and it is the only school in the state devoted to this particular handicap. There is no complete record of handicaps in Iowa, but splendid work has been done in Ringgold and Greene counties in screening handicaps by means of the \$60,000 appropriated in the last legislature. It is hoped that work may continue through all 99 counties as time goes on. Speakers and specific information on the subject of handicaps may be obtained through the Iowa Society for Crippled Children.

Mrs. H. I. McPherrin, chairman of registration, reported 70 members registered at the close of the morning session.

Following luncheon, Dr. R. L. Parker, President-Elect of the Iowa State Medical Society, brought greetings. He stated that there was a time when there were only two county medical societies in the state, but that the number was now 97, and he hoped fervently the auxiliaries would multiply rapidly.

Mrs. C. V. McCarthy, Commander of the Iowa Division of the Field Army of the American Cancer Society, explained the functional organization of the Society. She stated that doctors' wives are partners in saving human lives and that they need to be interested and active in the national cancer control program. There were ten deaths per day from cancer last year in Iowa, and that figure is higher than the national rate. Many workers are needed to reach all of the people. Doctors' wives should inform themselves by obtaining the recent pamphlet, entitled "Cancer," prepared by the Cancer Committee of the Iowa State Medical Society; it is available through the State Department of Health.

The motion was carried in convention that the subjects of Handicapped Children and Cancer Control be accepted as state projects and that individual auxiliaries study and participate in both causes.

The following officers were duly elected, and were installed by Mrs. M. N. Voldeng, first president of the Woman's Auxiliary to the Iowa State Medical Society: President, Mrs. M. H. Brinker, Jefferson; President-Elect, Mrs. Fred Moore, Des Moines; First Vice President, Mrs. A. G. Felter, Van Meter; Second Vice President, Mrs. E. H. Sibley, Sioux City; Third Vice President, Mrs. C. M. Franchere, Mason City; Secretary, Mrs. C. A. Nicoll, Panora; Treas-

urer, Mrs. H. G. Decker, Des Moines; and Directors: Mrs. W. S. Reiley, Red Oak, Mrs. Jay C. Decker, Sioux City, and Mrs. S. S. Westly, Manly.

Eight past state presidents attended the meeting: Mrs. M. N. Voldeng, Mrs. W. A. Seidler, Mrs. J. A. Downing, Mrs. S. E. Lincoln, Mrs. E. T. Warren, Mrs. F. W. Mulsow, Mrs. W. S. Reiley, and Mrs. J. C. Decker.—Mrs. K. M. Chapler, Chairman, Press and Publicity.

#### ANNUAL REPORT OF THE PRESIDENT

This has been a turbulent year, starting out during the war, and then came VE and VJ days, making it difficult to adjust ourselves to peace time. We are seventeen years old this year.

Our membership drive has been successful. Your president sent out 900 letters to physicians' wives in unorganized counties, and from this form letter 77 new members were secured. We also have four new counties organized this year with 66 members, making a total of 143 new members. There are 321 members in the county auxiliaries and 97 members at large, making a total of 418 members.

Mrs. Fred Moore, our program chairman, has plans to help in the drive for the Iowa Society for Crippled Children as part of next year's program.

Since this has been an important legislative year, we have been keenly interested in this phase of Auxiliary work. Bulletins have been sent to all auxiliaries by Mrs. J. A. Downing, chairman, keeping them informed on bills pertaining to medical legislation.

Mrs. Keith Chapler, press and publicity chairman, has, for the fourth year, conducted the "Woman's Auxiliary News" in the Iowa State Medical JOURNAL. Each committee chairman contributes to this section. Interesting articles from the *Bulletin* and *Hygeia* are also included.

Mrs. Daniel J. Glomset, public relations chairman, chose cancer for the special concern of the committee because of the new emphasis placed on that disease. The American Cancer Society has been reorganized and is ready to carry on a greatly amplified program.

Mrs. E. J. Butterfield is to be commended since she has been chairman of the Hygeia Committee only the last few months after our chairman resigned, and she has a report of 159-8/12 subscriptions. Congratulations to Dallas-Guthrie for its 50½ subscriptions.

Your president attended the National Auxiliary meeting in Chicago in June, 1945. This meeting was stimulating and helpful. She also attended the National Conference of Presidents and Presidents-Elect in Chicago in December, 1945, which was a very instructive meeting.

The following resolution was passed by the House of Delegates of the American Medical Association on December 5, 1945:

*Whereas*, The object of the Woman's Auxiliary is to aid the American Medical Association in every way possible; and

*Whereas*, The most urgent need at the present time is for widespread dissemination of knowledge concerning the hazards of current medical legislation; therefore be it

*Resolved*, That the House of Delegates of the American Medical Association requests the Woman's Auxiliary to use every avenue

possible to bring such information to its members and through them to the public.

Our fall board meeting was held in the Grace Ransom Tea Room in Des Moines on October 25, 1945. The resignation of Mrs. A. E. Merkel as president-elect was accepted with regret and Mrs. M. H. Brinker, first vice president, was made president-elect. Mrs. Fred Moore was chosen first vice president.

Dr. Martin Olsen, president of Iowa Medical Service and chairman of the special committee appointed by the Iowa State Medical Society to study and draw up proposals of prepayment plans, spoke to the Auxiliary representatives in regard to the astounding success Iowa Medical Service has enjoyed. It is being offered in conjunction with the Blue Cross hospital service. However, the medical profession will retain control of the medical portion of the program.

There was a luncheon with some of the chairmen at Younker's Tea Room in Des Moines to make final plans for the state meeting in April, 1946.

Your president received a letter from the national president, Mrs. Thomas, regarding Y.W.C.A. votes of delegates on socialized medicine. The physicians over the state were contacted and the Iowa delegates were all reached. Finally the committee of the Y.W.C.A. decided that the subject was too controversial to bring before the convention proper and the committee tabled the matter. Your president also sent material on socialized medicine to women's political groups for study on the Wagner-Murray-Dingell bill. She sent out letters to the 99 county extension directors, urging them to have Dr. Edmund Zimmerer speak on cancer at the Farm Bureau programs. Many of the counties responded and had this speaker on their programs.

Your president visited the Polk County Auxiliary October 26, 1945, following the board meeting, and enjoyed meeting the ladies. Due to circumstances beyond her control, she was unable to accept invitations to visit the Sioux Med-Dames, the Dubuque Auxiliary, and others.

She wishes to express her appreciation to Miss Mary McCord of the Central Office and all the others who helped her with her program. It is due to the splendid cooperation of the state officers, the state chairmen and other members of the state board that the above progress and accomplishments have been possible. She extends her thanks and good wishes. —Mrs. S. S. Westly, State President.

#### SPEAKERS BUREAU RADIO SCHEDULE

WOI—Wednesdays at 2:45 p. m.

WSUI—Thursdays at 9:30 a. m.

June 5-6 Health Precautions in the Summertime  
Roy G. Klocksien, M.D.

June 12-13 Undulant Fever  
Harold L. Ganzhorn, M.D.

June 19-20 Sunstroke and Sunburn  
Robert A. Powell, M.D.

June 26-27 Obesity  
Galen C. Boller, M.D.



# HISTORY OF MEDICINE IN IOWA

*Edited by the Historical Committee*

DR. WALTER L. BIERRING, Des Moines, Chairman

DR. HENRY G. LANGWORTHY, Dubuque, *Secretary* DR. CHARLES L. JONES, Gilmore City

DR. CLYDE A. HENRY, Farson

DR. LESTER C. KERN, Waverly

## Medical History of Wapello County

CLYDE A. HENRY, M.D., Farson

### Part V

#### MEDICAL SERVICE IN WAPELLO COUNTY

(Continued from last month)

From May 1, 1843, the date of settlement, to January 1, 1946, two hundred sixty-six\* men and women have practiced medicine in Wapello County. Many of the early physicians located in the small town and village communities, for it was here, as elsewhere in the great Middle West during the first half century of this period, that two-thirds of the people lived. Then dawned the age of scientific research and discovery. Every field of human endeavor became involved. People grew restless and emigration cityward set in. The population of Wapello County in 1900 was 35,357, of whom 18,197 lived in Ottumwa. There were 68 physicians living in Wapello County at that time, grouped as follows: 59 regular, one botanic, three homeopathic, and five not classified. The present population of Wapello County is approximately 45,000, of which about 35,000 are residents of Ottumwa; the health of the people is in the hands of 43 resident physicians, one itinerant physician, ten chiropractors and nine osteopaths. Some of the latter advertise themselves as "osteopathic physicians"; and, with as little as *one* year of preparation in a regular medical college, they are permitted, *by law*, to dispense the drugs of their choosing, while competitive surgery provides them with commensurate prestige and hospital service through the back door. Only four physicians remain in active practice outside Ottumwa—two at Eldon, one at Farson, one at Eddyville.

Nursing is, and has been for a period of years, a problem of growing concern to the people of Wapello County. The nursing staffs of the hospitals render a highly efficient service, but there

are not enough nurses in private practice. Registered nurses no longer engage in country practice; in fact, the eight-hour-day plan is unworkable in the country home. As to the practical, or untrained nurse, once solicitous of any nursing job, she, too, has "gone to town." Therefore, it is no longer possible, in Wapello County, to provide efficient medical, surgical or obstetric care for thousands of people who reside in the small towns and rural communities without hospitalization. Since hospitals are crowded to capacity, with waiting lists the rule, there appears to be but one solution: A county-owned nursing home, properly managed, with ample room to care for both medical and surgical convalescents. Other groups having public health responsibilities include ten nurse specialists employed as follows: two full-time visiting nurses for the county-state health program; one for the county clinic (full-time) with offices in the court house; four industrial nurses—two for John Morrell & Company and two for the Dain Manufacturing Company; and one for the Metropolitan Life Insurance Company who actually does bedside nursing. There is also a board of social welfare, with a suite of offices in the court house and a battery of clerks, secretaries and field workers, besides the pharmacists with a membership of twenty-four; the dental group numbering eighteen, and several veterinarians.

The Wapello County Medical Society has done much, down through the years, to encourage the policy of good fellowship among the members of the interprofessional groups. An outstanding example of this policy was celebrated September 18, 1934, when nurses, druggists, dentists, and veteri-

\*Dr. Siegmund F. Singer was omitted from list of Ottumwa physicians in the May issue of the Journal, page 230.

narians were invited to attend a dinner meeting at the Wesley Methodist Episcopal Church in Ottumwa. Each group was represented on the program: The nurses by Millie Jacobson, then head of the Iowa State Association of Registered Nurses; Dr. C. M. Work, a past president of the Iowa Dental Association; George J. Judisch, then president of the Iowa State Board of Pharmacy; and Dr. S. A. Spilman for the Wapello County Medical Society. Dr. J. C. Kepler, then president of the society, presided. There were 119 guests present.

#### SUNNYSLOPE

#### WAPELLO COUNTY TUBERCULOSIS SANATORIUM By

ROSE M. MCCLELLAND, B.A., Superintendent

In 1915 a check by the county welfare worker and county doctor disclosed the fact that 50 per cent of the orphanage among children in Wapello County was due to tuberculosis. These conditions were reported to the Board of Supervisors and in July, 1916, the present site of Sunnyslope Sanatorium was purchased by the County for \$5,000 and the first patient admitted in September, 1916. Miss Anderson was appointed superintendent, with the county doctor giving medical supervision. The institution at this time was an isolated area without electric lights or water. Roads were impassable each spring and fall.

The first Board of Trustees—Dr. J. F. Herrick, Dr. H. W. Vinson, Mr. J. B. Sax, Mrs. W. T. Harper, Mr. C. A. Harper, and Attorney E. K. Daugherty—put in many hours of tireless labor in investigating other institutions, conferences, and personal supervision. By the end of 1918 the institution was functioning under the efficient management of Miss Ellen Standing. In 1919 a bond issue of \$25,000 was used to enlarge the building to accommodate twenty-four patients. The following appointments were made by the trustees: Dr. H. W. Vinson, Medical Director; Dr. D. E. Graham, Eye, Ear, Nose and Throat; and Dr. W. L. Dunning, Dentist.

In 1922 the capacity was increased to forty patients and Dr. E. T. Edgerly was asked to assist Dr. Vinson. The next few years a progressive development of the Sanatorium was evident. As a county institution, Sunnyslope was unique for the affectionate position it occupied in the community. Its ability to function in a most efficient manner was due to the generosity of the public and the free service the local doctors gave the institution. Individuals and clubs furnished libraries, radios, pianos, food conveyors, x-ray machines, moving picture machines, and many cash donations. Even the gravel road leading to the hospital and all cement walks and drives were furnished by private individuals, as well as the beautification of the grounds.

The ministerial association took over religious service in 1924 and each Sunday both Catholic and Protestant services are held.

In 1925 the trustees presented at their annual meeting a medical service for approval by the attending physicians. This service was adopted and has continued to function ever since, with some changes in personnel. Besides the medical director the service included a specialist in eye, ear, nose and throat work, dentistry, pathology, general surgery, chest surgery, urology, and radiology; and in 1934 a pediatrician was appointed. A consulting staff from the medical society was also appointed. This staff holds regular monthly meetings at which cases are discussed with Dr. G. R. Johnson as Medical Director.

In 1935 the children's wing was built and dedicated as Edgerly Memorial. An elementary school was opened with a teacher supplied by our city school system.

Miss Standing resigned in 1937 and was succeeded by Rose M. McClelland, R.N.

Due to changes in trends of treating tuberculosis, heat was installed on the porches and some porches



Sunnyslope Sanatorium

converted into wards. Kitchen and diet kitchens were renovated and new equipment purchased; also, metal living room furniture and an x-ray machine were procured.

In 1938 a modern nurses' home was built.

From 1942 to 1945, with war making purchases almost impossible, it was the policy of Sunnyslope to keep the building and all equipment in good repair.

Outpatient services progressed each year. Each summer for ten years children from tuberculous contact homes were cared for, for two months, with the Christmas Seal Committee and Sunnyslope sharing the expense. The sleeping cabins were built by the Elks Lodge. This was discontinued at the beginning of the war. Tuberculin testing in High School is an annual project; the reactors are given an x-ray examination and follow-up work done. For one year a public health nurse was employed with her salary paid by the Christmas Seal Committee. Not being able to replace this full-time nurse, a summer program of follow-up work has been done. A spring clinic has been held free, the staff doctors donating their services.

For some years Sunnyslope has been an accredited institution.

A cottage on the grounds was set up at the beginning of the war as an emergency unit. This was used for children's isolation during the flood of May, 1944.



Due to lack of nurses the children's building had to be closed in November, 1944, and the children were sent home, since Sunnyslope was the only sanatorium in the state serving tuberculous children.

Fire destroyed the main building December 31, 1944. Twenty-two patients may be cared for in the former children's building until such time as a new fireproof building can be constructed.\*

Sunnyslope capacity: children 35; adults 70; total 105.

## THE HOSPITALS

By

MURDOCH BANNISTER, M.D.

### *St. Joseph Hospital*

"The city of Ottumwa had long since been in need of a hospital, and the officials, hearing of the new Sisterhood, sent a committee to consult with Father Kreckle pertaining to the Sisters opening a hospital, promising that the city would donate to them half the cost of a small building and equipment. Father Kreckle seemed to favor the undertaking and said he would confer with Mother Mary and the community at the earliest possible moment. Mother Mary willingly acceded to the idea as some of the Sisters were most anxious to do hospital work in preference to teaching. Father Kreckle advised Mother Mary to draw up plans and let the contract for the building as soon as possible, and he would inform the committee of her acceptance.

"Mother Mary began plans for a small building on the convent grounds and it was completed and

continued until 1890 when the Sisters moved to the site of the present St. Mary's school and established an academy. When the Sisters moved their academy to its present location, Ottumwa Heights, the building on Fourth Street was remodeled for a hospital and on February 23, 1914, patients were admitted for the first time into the St. Joseph Hospital. In a few years the capacity of this building became inadequate, steps were taken to expand the usefulness of the work, and in January, 1926, patients were moved to the new St. Joseph's on Ash Street, where a new era of service began. The total number of patients treated in this new hospital, up to the date of February 28, 1945, was 50,114.

In September, 1944, the management started to build a new home for nurses on the site of the former nurses' home, which had been destroyed by fire some few years before. When completed this home will give accommodations to thirty-two nurses, thereby relieving that number of beds in the main hospital building, and making a total number of 125 beds available for patients. This new home is to be a two-story building with assembly and recreation rooms, and will be a great addition to the hospital.

Superintendents (since 1914):

Sister Mary Peter  
Mother Mary Joseph  
Sister Mary John  
Sister Mary Rose  
Sister Anna Mary  
Sister Mary Magdalen  
Sister Mary Nichols

### *Ottumwa Hospital*

Much honor is due to the small group of women, banded together in what was known as the Mary Brooks Thrall Bible Class, who were the nucleus of the Ottumwa Hospital. They were desirous of doing something really worth while, and at the suggestion of Dr. S. A. Spilman chose this most worthy cause. From time to time, as they met in class, the subject was given their earnest and undivided attention, and advice sought from the business men of the city to enlighten them just a little farther. A final decision was made on October 24, 1892, to rent a property and get it equipped for its momentous service. The site chosen was the property of Alvin Lewis, on East Main Street, known to the older residents as the Paul Caster home.

On November 29, 1892, the Articles of Incorporation of the Ottumwa Hospital Association were filed with the Secretary of State, and the members of the Mary Brooks Thrall Bible Class became the incorporators. The first officers elected were Mrs. D. H. Emery, President; Mrs. T. A. Fulton, Vice President; Mrs. Samuel Mahon, Treasurer; Mrs. H. L. Waterman, Secretary.

Having secured the site, the work of preparing the building was started. In July, 1894, the hospital opened in charge of Miss Elizabeth Trotter of Owen Sound, Ontario, Canada, as Superintendent. The first patient was a colored miner from Keb, who was admitted on account of an injured foot. Rec-



St. Joseph Hospital

equipped by March, 1879. It was blessed and formally opened on St. Joseph's Day. Thus, the little 'Saint Joseph Hospital' became the nucleus of the magnificent St. Joseph Hospital of today."—By Mother Mary Francis. (In a summary of the History of the Congregation of the Sisters of the Humility of Mary.)

The building which housed this hospital still stands at 424 North Court Street. It is in a good state of preservation, is now owned by Dr. L. A. Taylor, and does service as an apartment house.

The staff chief was Dr. O'Neil; Dr. Lathrop and Dr. Hinsey were two other members. The hospital

\*A bond issue of \$300,000 was recently voted by Wapello County to rebuild and enlarge Sunnyslope Sanatorium.

ords show that he was discharged from the hospital as "cured." Seven beds constituted the bed capacity, but this was not enough and in a very short time six more were added, making a total of thirteen. In the first four months, twenty-seven patients had been treated. Of these four were accident cases and eighteen surgical cases. Besides the superintendent, there were three nurses, one cook, one laundress, and a janitor.

After a few years the capacity of the Caster home was found inadequate and the adjoining Paul Caster Infirmary was rented and occupied. Work continued in a very satisfactory way, but the ladies were not content, and on March 22, 1904, it was decided to buy the property on the corner of College and Second Streets, known as the "Gurley Baker home place." A more decided effort was put forth; funds were gathered through various methods such as suppers, sales, home talent minstrel shows, contributions from individuals and organizations, and the ground broken for the new building on August 1, 1904.

On September 12, 1904, the corner stone was laid for the new building, the one being occupied at the present time. Mrs. D. H. Emery, then President of the Association, officiated. Honorable J. J. Smith gave the address for the afternoon, and Dr. S. A. Spilman spoke in behalf of the physicians.

On March 23, 1905, the new hospital was dedicated and occupied. Thus, the dream of this Bible

of Trustees responsible for the entire work. Eleven trustees were elected, and on July 23, 1924, the first meeting under the new organization was held.

The number of patients admitted in one year has increased from 45 in the year 1894, to 1,969 in the year 1944, with a total of 54,914 patients for the fifty year period. The hospital days have increased from 12,980½ in the year 1913, to 22,162 in the year 1944. There are now fifty-three beds and twelve bassinets in the hospital.

There was a custom established by Dr. A. O. Williams whereby each operator in the Ottumwa Hospital was required to contribute a set amount, which at times has been fixed at \$2.00 and other times at \$1.00, to a fund to be used to purchase and maintain surgical equipment. The St. Joseph Hospital has also adopted this plan. The fund in each hospital is of sufficient amount in a year's time to keep the equipment complete.

#### Superintendents:

Miss Elizabeth Trotter, July 2, 1894 (arrival).

Miss Pearl A. Mothershead, 1915-1919.

Miss Adelaide Lewis, 1919.

Miss Lorena Ingraham, 1920-1921.

Miss Elizabeth Collins, 1922-1923.

Miss Lydia Neumyer, 1924.

Miss Mabel A. Bringgold, 1925-1927.

Capt. Jesse Mael, 1928-1929.

Edith Mae Hartsuck, 1930.

Mrs. Blanche Miles Hopper—.

Mrs. Lillian M. Carey, 1933—.

The care and management in both hospitals has been kept up to date at all times, and the medical and surgical staffs have done skillful work of a high order of excellence.

(To be continued)



Ottumwa Hospital

class was realized as a result of untiring efforts and willing cooperation of each member of the class and kind, interested friends. Fifteen of the eighteen private rooms were furnished by individuals, organizations, churches, and clubs. As the years have gone by, the hospital has seen a wonderful growth, and its need today is more room, which is evident of the good standing it has in the community and the value of its service rendered to suffering humanity. Steps have already been taken to replace the hospital on a suburban site north of the city. This will be a larger and more commodious hospital.

From 1893 to 1924, the management was under the direct supervision of the ladies, but believing that, with the constant growth of the institution, the time had come for them to relinquish the strenuous business part of the hospital to more practiced hands, a reorganization was effected making a Board

#### MORBIDITY REPORT

Disease	April '46	Mar. '46	April '45	Most Cases Reported From
Diphtheria	20	17	18	Chickasaw, Marshall, Black Hawk
Scarlet Fever	210	237	239	Polk, Woodbury, Des Moines
Typhoid Fever	*23	0	0	Audubon, Wright, Appanoose
Smallpox	2	2	4	Warren
Measles	702	146	174	Hancock, Webster, Boone
Whooping Cough	66	27	14	Dubuque, Linn, Bremer
Brucellosis	8	0	9	Butler, Clarke, Clinton
Chickenpox	162	110	347	Dubuque, Woodbury, Boone
German Measles	12	37	4	Humboldt, Adair, Washington
Influenza	0	0	0	.....
Malaria	29	41	2	Polk, Allamakee, Clinton
Meningococcus				
Meningitis	5	17	15	Polk, Floyd, Scott
Mumps	244	123	418	Des Moines, Dubuque, Story
Pneumonia	12	23	9	Floyd, Allamakee, Appanoose
Poliomyelitis	2	1	0	Woodbury
Tuberculosis	59	53	64	For the State
Gonorrhea	225	183	228	For the State
Syphilis	154	152	105	For the State

\*21 of the 23 cases are delayed.



# THE JOURNAL BOOK SHELF

## BOOKS RECEIVED

**HOWELL'S TEXTBOOK OF PHYSIOLOGY**—Edited by John F. Fulton, M.D., Sterling Professor of Physiology, Yale University School of Medicine. Fifteenth edition. W. B. Saunders Company, Philadelphia, 1946. Price, \$8.00.

**THE 1945 YEAR BOOK OF PEDIATRICS**—Edited by Isaac A. Abt, M.D., Professor of Pediatrics, Northwestern University Medical School. With the Collaboration of ARTHUR F. Abt, Comdr., M.C., U.S.N.R., Associate Professor of Pediatrics, Northwestern University Medical School. The Year Book Publishers, Chicago, 1946. Price, \$3.00.

**PREOPERATIVE AND POSTOPERATIVE TREATMENT**—Edited by Lt. Col. Robert L. Mason, M.C., A.U.S., Cushing General Hospital, Farmington, Massachusetts; and Harold A. Zintel, M.D., Harrison Department of Surgical Research, University of Pennsylvania School of Medicine; Assistant Surgeon, Hospital of the University of Pennsylvania. Second edition. W. B. Saunders Company, Philadelphia, 1946. Price, \$7.00.

**SYNOPSIS OF PHYSIOLOGY**—By Rolland J. Main, Ph.D., Professor of Physiology, Medical College of Virginia, Richmond. The C. V. Mosby Company, St. Louis, 1946. Price, \$3.50.

**MODERN MANAGEMENT IN CLINICAL MEDICINE**—By F. Kenneth Albrecht, M.D., S.A. Surgeon, U. S. Public Health Service; Kansas State Tuberculosis Consultant; Formerly Clinical Director, U. S. Marine Hospital, Baltimore, Md. The Williams & Wilkins Company, Baltimore, 1946.

**GASTRO-ENTEROLOGY**—By Henry L. Bockus, M.D., Professor of Gastro-enterology, University of Pennsylvania Graduate School of Medicine. In three volumes; Volume III—"The Liver, Biliary Tract and Pancreas, and Secondary Gastro-intestinal Disorders." W. B. Saunders Company, Philadelphia, 1946. Price, 3 Volumes and separate desk index, \$35.00.

**THE 1945 YEAR BOOK OF GENERAL SURGERY**—Edited by Evarts A. Graham, M.D., Professor of Surgery, Washington University School of Medicine, Surgeon-in-Chief of the Barnes Hospital and of the Children's Hospital, St. Louis. The Year Book Publishers, Chicago, 1946. Price, \$3.00.

**AMBULATORY PROCTOLOGY**—By Alfred J. Cantor, M.D., Associate Proctologist, Kew Gardens Hospital, Long Island, New York. With a foreword by BEAUMONT S. CORNELL, M.D., Editor, American Journal of Digestive Diseases. Paul B. Hoeber, Inc., New York, 1946. Price \$8.00.

## BOOK REVIEWS

### THE MANAGEMENT OF FRACTURES, DISLOCATIONS AND SPRAINS

Edited by John Albert Key, M.D., St. Louis, Mo., Clinical Professor of Orthopedic Surgery, Washington University School of Medicine, Associate Surgeon, Barnes, Children's and Jewish Hospitals; and H. EARLE CONWELL, M.D., Birmingham, Ala., Orthopaedic Surgeon to the Tennessee Coal, Iron and Railroad Company and the American Cast Iron Pipe Company, Chairman of the Committee on Fractures and Traumatic Surgery of the American Academy of Orthopaedic Surgeons. Fourth edition. The C. V. Mosby Company, St. Louis, 1946. Price, \$12.50.

The fourth edition of this excellent textbook on bone and joint injuries makes it even more valuable as an outstanding work regarding the treatment of fractures, dislocations and sprains anywhere in the body. Beneficial additions have been made regarding the treatment of compound fractures and fractures of the spine and hip. Mention of the knowledge gained during war surgery has been added to this text. Old illustrations have been discarded and replaced by about two hundred excellent illustrations.

Again this volume may be wholeheartedly endorsed for anyone interested in the treatment of fractures.

E. M. G.

### JOURNAL OF THE HISTORY OF MEDICINE AND ALLIED SCIENCES

January, 1946, issue, Volume I, Number

1. Published quarterly by Henry Schuman, 20 East 70th Street, New York 21, New

York. Subscription rate, \$7.50 in United States. Single copies, \$2.50.

With the avowed aim of cultivating medical history as "a vital, integral part of medicine," this publication has been launched with an impressive board of editors and consultants headed by Dr. George Rosen and representing not only the United States but approximately 20 other nations.

The history of medicine has not had a wide appeal among practicing physicians in this country in recent years, a trend which the editors of this new publication deplore and hope to reverse. The physician, they point out, still acknowledges the importance of the historic approach each time he speaks of the "case history." Recognizing that medical history is now being made, particularly as a result of the war years, this new quarterly proposes to deal with "the evolution of current developments" as well as with the more remote past. It is interesting that Dr. Henry E. Sigerist, editor of the only other American periodical in this field, the *Bulletin of the History of Medicine*, is one of the consulting editors of this new publication, which hopes to encompass public health, dentistry, nursing, pharmacy, veterinary medicine, and related sciences in its historical studies.

The inaugural number contains eight articles on medical history, one on dentistry, and one on pharmacy. Format, typography, and illustrations are on a plane with the high standard of scholarship evinced by the contributors. Several typographic errors may perhaps be forgiven even so erudite a publication on its first appearance. It is to be hoped, however, that future issues will clarify the cryptic statement that "The JOURNAL is published quarterly . . . by the Society at 450 Ahnaip Street, Menasha, Wisconsin,"

for this reviewer was unable to find what "Society" is concerned.

Not the least interesting of the regular departments, which are to include book reviews and notes on contributors, promises to be "Notes and Queries," conducted by Max H. Fisch, Ph.D., head of the Rare Book Division at the Army Medical Library.

H. J. S.

### PERSONALITY FACTORS IN COUNSELING

By Charles A. Curran, Ph.D., St. Charles College, Columbus, Ohio; Preface by Michael J. Ready, Bishop of Columbus; Introduction by Carl R. Rogers, Professor of Psychology, University of Chicago. Grune & Stratton, New York, 1945. Price, \$4.00.

In this searching analysis of twenty counseling interviews, Father Curran discloses the gradual unfolding of one individual's mind and feelings as he passes from a stage of confusion and maladjustment to one of normal adjustment. His study offers valuable suggestions for the solution of emotional problems and involves the whole question of modern society and the normal individual. The volume stimulates thinking, broadens the concept of discussing a problem for one's mental release, and broadens the concept of all those concerned with the promotion of individual growth.

All those whose work brings them in contact with personal problems—educators, doctors, nurses and social workers—can find much in this study of personal growth and development that will prove advantageous in their own work with individuals.

J. P.

### THE 1945 YEAR BOOK OF INDUSTRIAL AND ORTHOPEDIC SURGERY

Edited by Charles F. Painter, M.D., Orthopedic Surgeon to the Massachusetts Women's Hospital and Beth Israel Hospital, Boston. The Year Book Publishers, Chicago, 1946. Price, \$3.00.

Dr. Painter again presents a review of the literature of the past year on orthopedic surgery and industrial medicine. Particularly noted are sections on arthritis, osteomyelitis, and infantile paralysis. A generous use of illustrations does much to supplement the text, which is of especial interest to orthopedic surgeons and physicians engaged in industrial medicine. The volume, however, will appeal to all physicians.

E. M. G.

### THE CARE OF THE AGED

#### GERIATRICS

By Malford W. Thewlis, M.D., Attending Specialist, General Medicine, United States

Public Health Hospitals, New York City; Attending Physician, South County Hospital, Wakefield, R. I.; Director, Thewlis Clinic; Special Consultant, Rhode Island Department of Public Health. Fifth edition, thoroughly revised. The C. V. Mosby Company, St. Louis, 1946. Price, \$8.00.

This book is a discussion of the general social problems of the aged as well as physiologic and pathologic changes. The various diseases are not discussed in great detail, however the essential points of each as applicable to the aged are covered.

The material throughout the book is well divided into groups of conditions and systems with special topics of direct importance. The first twelve chapters bring to light many things that should be thought of frequently. The section on pathologic conditions is an excellent review of possibilities in this group of people. The illustrations are excellent, and the references which follow each chapter are of definite value.

This work is easy to read and understand. It would be well for each physician treating anyone past fifty years of age to have this book on his desk.

D. H. K.

### SYNOPSIS OF PHYSIOLOGY

By Rolland J. Main, Ph.D., Professor of Physiology, Medical College of Virginia, Richmond. The C. V. Mosby Company, St. Louis, 1946. Price, \$3.50.

Dr. Main presents a comprehensive and concise text, especially designed to meet the requirements of the physician and medical student desiring a review of physiology.

In an effort to keep the book as brief as possible, the author has restricted illustrations and used abbreviations whenever possible. Each sentence of the book's 314 pages gives the reader a concise statement of fact or theory. The data in the main have been restricted to man. Mention is made of physiologic disturbances in disease, which increases the value of the text.

This is an excellent review of physiology, presented in a concise and informative manner.

H. G. E.

### THE OSSEOUS SYSTEM

#### A HANDBOOK OF ROENTGEN DIAGNOSIS

By Vincent W. Archer, M.D., Professor of Roentgenology, University of Virginia Department of Medicine. The Year Book Publishers, Inc., Chicago, 1945. Price, \$5.50.

This handbook is well up to the standards of previous handbooks covering the roentgen diagnosis of various systems. The material is well organized and the reproductions of roentgenograms are of uniformly good quality. The descriptions are short, concise, and informative.

W. H. G.



## SOCIETY PROCEEDINGS

### Black Hawk County

The regular meeting of the Black Hawk County Medical Society was held in Waterloo, Tuesday, May 21, at 6:30 p. m., in Black's Tea Room. Robert C. Hardin, M.D., of the State University of Iowa College of Medicine, presented an address on The Clinical Significance of the Rh Factor.

C. A. Waterbury, Jr., M.D., Secretary

### Cerro Gordo County

The Cerro Gordo County Medical Society held its last meeting in the spring series Tuesday, May 14, at the Hanford Hotel in Mason City. The guest speaker was Carl G. Morlock, M.D., of the Mayo Clinic who spoke on The Complications of and Indications for Surgical Treatment in Peptic Ulcer. Lantern slides were used in conjunction with the talk.

D. L. Long, M.D., Secretary

### Decatur County

The monthly meeting of the Decatur County Medical Society was held in Leon Tuesday evening, May 7, with a large number of guests present for the seven o'clock dinner served at Painter Tea Room. Following dinner, the scientific program was presented at the Decatur County Hospital. The guest speakers were H. Dabney Kerr, M.D., head of the Department of Radiology at the State University of Iowa College of Medicine, who spoke on Radiation Therapy, and S. Freifeld, a resident in radiology at the College of Medicine, who spoke on Radiologic Diagnosis of Chest Lesions.

W. N. Doss, M.D., Secretary

### Greene County

The Greene County Medical Society and Auxiliary held a joint meeting in Jefferson at the Gem Tea Room Thursday evening, May 16, at 6:30 o'clock. Several interesting case reports were presented and discussed.

J. R. Black, M.D., Secretary

### Johnson County

The regular monthly meeting of the Johnson County Medical Society was held in Iowa City at the Hotel Jefferson on Wednesday, May 1, at 6:00 p. m. Recent advances in ophthalmologic methods was the topic under discussion. The Department of Ophthalmology of the State University of Iowa College of Medicine had charge of the program.

### Linn County

The Linn County Medical Society held its regular monthly meeting at the Roosevelt Hotel in Cedar Rapids, Thursday, May 9, at 6:30 p. m. The guest speaker of the evening was French K. Hansel, M.D., a member of the faculty of Washington University

School of Medicine in St. Louis, who spoke on Nasal Allergy.

### Louisa County

A dinner meeting of the Louisa County Medical Society was held Thursday evening, May 9, at Dr. Leslie E. Weber's cottage just outside Wapello with the physicians' wives in attendance. Following dinner the girls' sextette of the Wapello High School entertained the group with several selections before the doctors adjourned for their business meeting.

The June meeting of the Society will be held at the home of Dr. Kyle T. DeYarman in Morning Sun Thursday, June 13.

### Montgomery and Page Counties

A combined meeting of the Montgomery and Page County Medical Societies was held in Red Oak at the Hotel Johnson on Thursday evening, April 25. One of the speakers for the evening was Robert M. Collins, M.D., of Council Bluffs, whose topic was Leukorrhea. Charles D. Humbert, M.D., of Barnard, Missouri, who was accompanied by a seven foot, six-inch Negro, presented a talk on Giantism. Dr. Humbert is recognized as an authority on giants.

J. F. Aldrich, M.D., Secretary, Page County

### Scott County

On Monday, May 6, the Scott County Medical Society held its regular monthly meeting in Davenport at the Lend-A-Hand Club. Dinner was served at 6:00 p. m. and was followed by a business meeting.

J. H. Sunderbruch, M.D., Secretary

### Winneshiek County

The Winneshiek County Medical Society was host in Decorah to the Allamakee, Fayette and Howard County Medical Societies on April 25. There were thirty-four doctors in attendance. Following a turkey dinner which was served at 6:30 p. m., Robert L. Jackson, M.D., from the Department of Pediatrics of the State University of Iowa College of Medicine, gave a talk on The Importance of Breast Feeding in Infants. Following this, Fred L. Knowles, M.D., of Fort Dodge, presented as his topic The Treatment of Intracapsular Fractures of the Femur. He showed a number of x-ray films, pins and other equipment used in the treatment of these fractures.

H. H. Ennis, M.D., Secretary

### Iowa-Illinois Central District Medical Association

The Watch Tower Inn, Rock Island, Illinois was the setting for the annual meeting of the Iowa-Illinois Central District Medical Association on Thursday afternoon and evening, May 10. Officers elected were as follows: Dr. Joseph K. Hanson of Moline, president; Dr. Arthur A. Garside of Davenport, vice

president; Dr. James Dunn of Davenport, secretary; Dr. Albert W. Wise of Rock Island, assistant secretary and Dr. Florens E. Bollaert of East Moline, treasurer. Drs. Glen W. Doolen of Davenport and Herbert P. Miller of Rock Island were elected censors for a two year term. One hundred and fifty doctors and their wives attended.

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### PERSONAL MENTION

The JOURNAL is pleased to announce the release of the following physicians from active military duty:

**Dr. George H. Bassett**, who practiced in Sac City prior to entering military service, has now been placed on inactive status and is located in Memphis, Tennessee. Dr. Bassett was on active duty more than three years and at the time of his release held the rank of Commander in the Navy Medical Corps.

**Dr. Fred L. Blair, Jr.**, of Fonda, has received his release from active duty with the Navy Medical Corps after four years of service. Dr. Blair held the rank of Lieutenant at the time he was placed on inactive status.

**Dr. Francis K. Burnett**, who was located in Clarinda before entering the Army Medical Corps in 1941, has now received his discharge and is living in Cheyenne, Wyoming, where he is associated with the Veterans Hospital. Dr. Burnett held the rank of Lieutenant Colonel at the time of his release.

**Dr. Robert M. Chapman** has reopened his office in the Higley Building in Cedar Rapids following more than forty-three months of active duty in the Army Medical Corps. Dr. Chapman held the rank of Major at the time of his release.

**Dr. James H. Coddington** of Humboldt has received his discharge from the Army Medical Corps and at present is taking postgraduate work at the Cook County Graduate School of Medicine in Chicago. He plans to resume his practice in Humboldt about August 1. Dr. Coddington, a Major, went on active duty with the Army Medical Corps in September, 1942, and served in the Philippines just prior to his separation on April 23, 1946.

**Dr. Loren E. Collins** of Estherville has received his discharge from the Army Medical Corps following almost three years of active service. Dr. Collins held the rank of Captain at the time of his release.

**Dr. Stuart H. Cook** has returned to Rock Rapids to resume his medical practice after more than three years of active duty in the Army Medical Corps. Dr. Cook held the rank of Major at the time he received his discharge.

**Dr. Robert M. Cullison**, who formerly was located in Dike, was recently discharged from the Army

Medical Corps with the rank of Lieutenant Colonel. Dr. Cullison is now located at Fort Howard, Maryland, where he has accepted the appointment of Clinical Director of the Veterans Hospital.

**Dr. Kyle T. DeYarman** has resumed his medical practice in Morning Sun following more than three years of active duty in the Army Medical Corps. Dr. DeYarman, a Captain at the time of his separation, just recently returned from service in the Philippines.

**Dr. Lewis J. Dimsdale** has resumed the practice of internal medicine in Sioux City, with offices in the Frances Building. Dr. Dimsdale, a Major in the Army Medical Corps, had been in the service for forty-three months, during which time he was assistant chief of the medical service and chief of the allergy clinic at Schick General Hospital in Clinton.

**Dr. Ralph R. Edwards** has received his discharge from the Army Medical Corps and has resumed his practice in Centerville in association with Drs. Frank B. Leffert and Charles F. Brummitt. Dr. Edwards, a Major, went on active duty in September 1942 and just recently returned from a tour of duty in the European Theater.

**Dr. Martin G. Ericsson** has returned to Cedar Falls to resume his medical practice following his release from three years of active duty with the Army Medical Corps. Dr. Ericsson held the rank of Captain at the time he received his discharge.

**Dr. Grace E. Field**, who was associated with the University Hospitals prior to joining the United States Public Health Service, has now received her release and is located in Denver, Colorado. Dr. Field, a Surgeon (R) in the Public Health Service, returned from duty in the European Theater the latter part of 1945.

**Dr. Everett B. Getty** has returned to Primghar to resume his medical practice following his release from active duty in the Army Medical Corps. Dr. Getty, a Major, was in the service more than three years and returned from the European Theater just prior to the time he received his discharge.

**Dr. Milton D. Grossman** has resumed his practice in Sioux City after more than four years of active duty in the Army Medical Corps. Dr. Grossman held the rank of Captain at the time he received his discharge.

**Dr. George R. Hoffman** of Lacona has received his discharge from the Army Medical Corps and has become associated with the University Hospitals in Iowa City. Dr. Hoffman held the rank of Captain at the time of his release.



Dr. Nevill M. Joyner, who was located in Fort Dodge prior to the time he entered the Army Medical Corps, has now received his discharge and is located in Washington, D. C.

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Dr. John N. Kenefick has been placed on inactive status with the Medical Corps of the Navy and is resuming his practice in Algona. Dr. Kenefick held the rank of Commander at the time he was released to inactive duty.

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Dr. John B. Larson, who was located in Laurens prior to the time he entered military service, has now received his discharge and is living in Louisville, Kentucky, where he is associated with the Louisville General Hospital. Dr. Larson held the rank of Captain in the Army Medical Corps.

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Dr. Ralph M. Laughlin, who practiced in Tipton before he went on active duty with the Navy Medical Corps, has now been placed on inactive status and at present is residing in Cedar Rapids. Dr. Laughlin held the rank of Lieutenant Commander at the time he was released.

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Dr. James W. Martin, who practiced in Holstein before entrance into the Medical Corps of the Army Air Forces, has just recently been released from active duty after forty-three months of service. He held the rank of Captain at the time he received his discharge. Dr. Martin is now practicing medicine and surgery in Cherokee in association with Dr. James H. Wise.

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Dr. Paul W. Morgan of Mason City has received his discharge from the Army Medical Corps following a period of active duty of more than three years. Dr. Morgan, a Captain, recently returned from service in the European Theater.

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Dr. Alpheus W. Patterson, who practiced in Fonda before joining the Army Medical Corps and who for the past eighteen months has been stationed at the Veterans Administration in Des Moines, has recently been separated from the service. He will continue his work in the Veterans Hospital as chief of the reception and outpatient service. Dr. Patterson held the rank of Captain at the time he received his discharge.

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Dr. Gerald R. Rausch, who was located in Clarinda prior to entering the Medical Corps of the Army Air Forces, has now been relieved from active duty and is temporarily residing in Oshkosh, Wisconsin. Dr. Rausch was in service three and a half years, and he held the rank of Captain at the time of his release.

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Dr. Martin J. Ryan has resumed his practice in Sioux City following his release from active duty in the Medical Corps of the Army Air Forces. Dr. Ryan, a Major, spent more than three and a half years in the service.

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Dr. Ralph J. Selman has just recently returned to Ottumwa following his release from the Army Medical Corps. Dr. Selman was on active duty more than four years and at the time of his release held the rank of Colonel.

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Dr. James A. Skultety has resumed his medical practice in Des Moines, with offices in the Equitable Building, following his release from active duty in the United States Public Health Service. Dr. Skultety, a Passed Assistant Surgeon, entered the service in September 1942.

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Dr. Roy W. Tandy of Morning Sun has been released from active duty in the Medical Corps of the Navy after three years of service. Dr. Tandy held the rank of Commander at the time he was placed on inactive status.

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Commander William E. Walsh, who was reported in the March issue as having resumed his practice in Hawkeye, has not been released from active duty and at the present time is stationed at the U. S. Navy Recruiting Station in Cleveland, Ohio.

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Dr. Sidney E. Ziffren, who was at the University Hospitals prior to the time he entered the Army Medical Corps, has now been released from active duty and is located in Shanghai, China, where he is associated with UNRRA. Dr. Ziffren held the rank of Captain at the time of his release.

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The following physicians, who were previously reported released from active military duty, have announced the establishment of their offices in new locations:

Dr. Clifford W. Thomas, who practiced in Forest City for several years before he entered military service, has now joined the staff of the Park Hospital Clinic in Mason City where he will specialize in internal medicine.

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Dr. Wendell M. Willett has moved to Washington, D. C., where he is establishing an office in which to continue his practice of dermatology. Dr. Willett was located in Des Moines prior to the time he joined the Army Medical Corps.

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Dr. James Marr, who has practiced in Silver City for the past fourteen years, has given up his practice because of ill health and at present is residing in Daytona Beach, Florida.

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Dr. Earl O. Reynolds has announced his retirement from the active practice of medicine after almost thirty years of service in Greenfield. He plans to move to California in a few months.

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Dr. Forest H. Coulson has become associated with Dr. George B. Crow of Burlington, with offices in the Medical Arts Building. Before entering the

Army Medical Corps Dr. Coulson was a resident at the University Hospitals in Iowa City.

**Dr. Frederick H. Rodemeyer** of Sheffield has announced that on June 1 **Dr. Wendel W. Taylor** will become associated with him in the general practice of medicine. Dr. Taylor was graduated in 1940 from the State University of Iowa College of Medicine and was released from the Army Medical Corps in November 1945.

**Dr. J. Keith Pickens** has located in Fort Dodge where he is associated with **Dr. Albert A. Schultz**. Dr. Pickens, who was graduated in 1940 from Northwestern University Medical School, will limit his practice to internal medicine, diagnosis and consultations.

**Dr. William C. Wildberger** of Boston, Massachusetts, has joined the staff of the Rohlf Memorial Clinic in Waverly. He was just recently released from the Army Medical Corps with the rank of Major. Dr. Wildberger was on active duty four years, one year of which he spent as a member of the staff of the 129th General Hospital in England.

**Dr. Robert A. Towle** has become associated with **Dr. George A. Braunlich** of Davenport, with offices in the Davenport Bank Building. He was released from active duty with the Navy Medical Corps the first of this year with the rank of Lieutenant Commander, after having served four years. Dr. Towle was on the staff of the University of Iowa College of Medicine before entering the Navy.

**Dr. Paul R. Slater** assumed his duties as Director of the Serum-Plasma Center and Associate Director of the Division of Preventable Diseases of the State Department of Health on May 1. During 1941, Dr. Slater served as Medical Director of the Interstate Malaria Survey for Illinois, Minnesota, Wisconsin, Missouri, and Iowa. Following a year of post-graduate work in the School of Hygiene and Public Health in Baltimore, Dr. Slater enlisted in the Army in June, 1942. For a year and a half he served with General Simmons in the Preventive Medicine Division, Office of the Surgeon General, and for two years in the China, Burma, India Theater. He was separated from service May 1 with the rank of Lieutenant Colonel.

### MARRIAGE

Miss Mary Theo Schmid, daughter of Mrs. George E. Schmid of Mason City, and Dr. John E. Rock of Davenport were united in marriage Wednesday, May 15, in Dubuque at St. Raphael's Cathedral. Following a wedding trip to California, the couple will be at home after July 1 at 327 McClellan Boulevard in Davenport. Dr. Rock has practiced in Davenport for several years, specializing in diseases of the eye, ear, nose and throat.

### DEATH NOTICES

**Gleysteen, Richard Jacob**, of Alton, aged sixty-five, died May 4 of cardiac asthma. He was graduated in 1905 from Rush Medical College, and at the time of his death was a member of the Sioux County and Iowa State Medical Societies.

**Hinrichs, Robert Gerhard**, of Manson, aged fifty-eight, died May 4 after a short illness. He was graduated in 1915 from the Chicago College of Medicine and Surgery, and at the time of his death was a member of the Calhoun County and Iowa State Medical Societies.

**Moulton, Milo Willis**, of Bellevue, aged seventy-two, died April 21 following a year's illness. He was graduated in 1898 from the State University of Iowa College of Medicine, and at the time of his death was a member of the Jackson County and Iowa State Medical Societies.

**Peterson, August John**, of Forest City, aged seventy, died April 16 after an illness of two years. He was graduated in 1901 from the State University of Iowa College of Medicine, and had long been a member of the Hancock-Winnebagos and Iowa State Medical Societies.

**Pollock, Roscoe**, of Douds, aged sixty-four, died May 2 from injuries received in a fall at his home. He was graduated in 1905 from Keokuk Medical College, College of Physicians and Surgeons, and at the time of his death was a member of the Van Buren County and Iowa State Medical Societies.

### SOCIAL SECURITY AND PENDING LEGISLATION AFFECTING IT

**Senator B. B. Hickenlooper**

(Continued from page 264)

government must not be permitted to absorb and control. The function of government, as we conceive it, is to serve the people, but whenever government ceases to serve the people and the people themselves become the servants of government, then freedom is destroyed and progress held back.

I think legislation will shortly be proposed not only to supplement worthy legislation already passed in the field of genuine government aid, but to enlarge the field of government aid, research, and development as an adjunct to the public health of the American people. However, legislation which proposes to take or change in effect and take over the entire field of social and medical activities of the people of this country must not be enacted unless we are ready to surrender ourselves to a socialized dictation which is revolting to free men.



# The JOURNAL

of the

## Iowa State Medical Society

VOL. XXXVI

DES MOINES, IOWA, JULY, 1946

No. 7

### RECENT DEVELOPMENTS IN HOSPITAL ORGANIZATION AND MEDICAL PRACTICE THAT MAY AFFECT THE FUTURE

WILLIAM A. O'BRIEN, M.D., Minneapolis

The sharp trend toward specialism has resulted from the tendency of hospitals and governmental agencies to use the certification of the American Board of Surgery and the other surgical specialty boards for rating purposes. The increased interest in training for specialty practice started more than thirty years ago with the development of training programs in universities leading to advanced degrees (University of Minnesota and Mayo Foundation and others). Physicians in the service saw the advantage of having ratings by specialty boards, and many of them resolved to secure these advantages when they returned home. The requests for training were largely in this field and not for short courses. Physicians and laymen who are wondering why all service physicians are not back apparently do not realize that this change in attitude toward practice has occurred.

Hospital service and medical practice are so closely related that what affects one affects the other. Physicians make few house calls even in rural districts, and the majority of patients are seen in either offices or hospitals. Organized staffs in open hospitals are new, although they have functioned for years in closed staff hospitals (voluntary and teaching). The trend toward the teaching type of hospital organization means departmentalization and specialization.

When hospitals attempted the control of surgical practice through the use of ratings on the abilities of surgeons, they discovered that they were largely of two types, one an operating general practitioner and the other a specialist who limits his practice to surgery. The former came

into surgery through experience (they make up the bulk of the surgeons in middle and late life), while the younger men have been trained in surgery without the benefit of general practice. While the boards in surgery and the surgical specialties recognize the value of both types of education, most of them insist on a formal period of instruction which many of our practicing surgeons did not have. If surgical practice is to be limited to Board men and general practitioners are not to be permitted to do their own surgery, what started out to be a fairly simple problem (control of surgical practice) has now become a major issue in medicine.

When the American Boards were established, little did they realize the furor which the movement would cause, and even today most of them are bewildered by the change of events. Practicing physicians are most concerned over the question of specialism, and daily I receive requests for advice as to whether or not a man of a certain age and experience should try for the Boards.

Further confusion also arises in attempting to advise young men about opportunities in "general practice." In the Army, the same personnel number was applied to recent graduates and to men who had been in general practice for a number of years. Young service physicians, who saw that the older general practitioners did not receive good clinical service assignments, reasoned that if socialized medicine came they would experience the same difficulty, and while to go into general practice might be the expedient thing to do from a monetary standpoint, if social change came they would be frozen in their classification and they might not be able to get out.

For years medical education has been in the hands of specialists, and all the teaching today is done by individuals who limit their interests to special fields. Some medical schools have tried having general practitioners on the staff without obvious success. The University of Minnesota has had a series of lecturers on the practice of

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medicine, given by practitioners. In spite of this influence, few young medical men aspire to be full-time medical teachers.

The last two graduating classes of the University of Minnesota Medical School were polled on their plans, and only one of the 212 graduates said he was going into practice after a one year internship, and 85 per cent said they were going to seek advanced training. The majority (60 per cent) planned to practice in small communities in small groups. Their income desires were modest and one third of them were not averse to governmental control of medicine. In the past, 56 per cent of our graduates have gone back to Minnesota and the last two classes indicated that 54 per cent planned to do so.

Hospital development is also affected by changes in staff organization, and while many communities are planning to build hospitals, largely based on local needs or desires, no over-all plan has yet been developed to locate hospitals at strategic points in relation to the new developments in medical practice. In some cases the Chamber of Commerce is back of the community hospital idea, and in others the desire of a physician to establish a certain type of practice may be the motivating factor. The public health, medical, and hospital groups in Manitoba, Canada, are attempting to solve this problem by planning hospitals on the basis of medical practice and on community needs. The Canadian system of hospitals will include four specific types: rural health center; district hospital; regional hospital; and medical center.

Rural health centers will contain six to twelve beds depending on the needs of the community (present plan calls for 78 centers). They will serve as a facility for maternity, medical, and emergency services. Such surgical patients as will be brought to them will receive emergency care, and they will be sent to the district hospital if necessary.

The floor plan for the one story building includes reception room; office for hospital nurse; examining and dressing room; emergency treatment room for small wounds, minor surgery, and emergency operations; a small laboratory; an office type x-ray machine; and a separate delivery room. There will be three or six wards, each containing two beds each; for the most part these beds will be used for maternity cases. A utility room, small nursery, and offices for the physician and nurse will complete the plan. On the ground floor, there will be living quarters for the nurses, dining room, and kitchen. Boiler room, fuel room, and laundry are located in the rear.

These health centers will represent a combination physician's office, obstetric hospital, emergency

station, and public health center. The community is required to raise through levy or contributions all the money needed. The estimated cost is \$25,000 to \$50,000 (six to twelve beds). The physicians are paid on a prepayment basis and an approved Blue Cross plan will pay for hospital care.

The Canadians plan to establish 33 district hospitals to include one or two municipalities each. A number of existing hospitals will be enlarged or renovated. The rest will be built. These thirty bed district hospitals will be equipped with modern operating rooms, x-ray and laboratory facilities. They will serve as a place for training undergraduate nurses. Patients from rural health centers who require surgical treatment will be cared for here.

The four regional centers will be large general hospitals completely equipped for all kinds of medical, surgical, and special service. They will be located at Winnipeg, St. Boniface, Brandon, and Dauphin.

Ten per cent of illness is of obscure or complicated nature requiring the services of medical and surgical specialists. In the Manitoba plan this would be cared for by the medical faculty of the University. This center will serve as a training place for doctors and health personnel for the province. Here the practicing physicians of rural and urban communities come for continuation courses.

As one observes the trend in our section, it is apparent that many small communities are thinking of hospitals in terms of district hospitals when actually they should be thinking of small institutions like the Canadian health center. The "civic and commerce" spirit back of some of these movements is overlooking the possibility of competition from other communities in their district and also the necessity of having top-notch medical service to operate a 40-bed hospital properly.

An example of good community hospital planning follows: Town A wants to build a community hospital. The town population is 1,300; that of the contributory territory is 1,700. The latter was determined by checking subscriptions to local newspaper, bank lists, and charge accounts at stores. The town and country unit is therefore 3,000 people. They should plan four or five beds for every 1,000 population. This community's needs could be served by twelve to fifteen beds, but they had been planning a 40-bed hospital since the surrounding towns did not have hospitals. As soon as one community builds, however, the others proceed to do likewise and the race is on.

It was suggested to this community that the



hospital should be equipped to care for maternity cases, newborn infants, acute medical problems, and emergency surgery, but it was questionable if they should plan for chronic medical cases and elective surgery. Instead they should build an extra unit of five or six beds for the care of the elderly, who do not need regular medical and nursing service, but who could be moved into the hospital for this care if necessary. (Note: It is surprising that in our anxiety to develop new hospitals everyone seems to forget the old folks who are a greater problem.)

Community A was advised to visit the Minnesota Department of Health for the booklet on Licensing Laws and Standards for Hospitals and Related Institutions for Minnesota.

The committee was told to form the nucleus of a hospital board which should include a cross section of the various elements in the community. Many boards exclude physicians, ministers, and undertakers from membership. Physicians in such communities tell us that medical staffs are in a much better position to get things from the board if physicians are not members.

A community will have to decide whether to build the hospital with tax funds or with donations, or both. In the former it is easier to build, while with the latter it is easier to control. Some money can be appropriated from municipal sources for a war memorial. Federal sources of help are possible.

Even if small community hospitals are planned to meet the special needs of their people, it is not likely that physicians will be interested in these locations unless something is done to improve the economic and social standing of the general medical man. At the present time many recent graduates consider it a "negative" branch of medicine, something which you enter if you are in the lower ranks of your class or if you cannot secure a residency, if you are broke, or if you must wait to get your advanced training place.

Although the public clamors for the general man and the medical profession extols his virtues, most general men insist that unless they can practice some surgery, they will lose their standing with their patients.\* The development of plans to pre-pay medical service also make the non-operating general man's position less desirable, for again the fees for examinations of patients and opinions are relatively too low and the fees for surgical operations are relatively too high. If the fees were equalized, there would be some incentive to enter general practice, for then it would be on a par with the other specialties.

Since the trend is toward specialism, training programs should be established in general medicine. The University of Minnesota is considering a plan of one year straight medical service, a second year divided between obstetrics and pediatrics, and the third year preferably in medicine with psychiatry emphasized. In other institutions where this outline has been followed, the physicians have access to surgery and special medical services, consultation and case histories, and they spend a portion of the time on the emergency service. It would be a step forward if university graduate schools recognized a major in general medicine, if the specialty boards recognized it as a specialty, and if hospital staff organizations included it as a specialty, but still there would be little reason for anyone to enter it if fee schedules did not give it recognition.

General medical men are needed everywhere in small towns and large, and they can be recruited from the ranks of those who entered medicine with the idea of being family advisers. Their attitude toward medicine is largely that of those who have to decide between the priesthood, the ministry, and medicine. They would not have to be taught ethics in the medical school, and they would occupy the same relationship to the family that the great general medical men of the past did. Organized Medicine should get behind the movement to recognize general medicine, and a hopeful sign is the announcement by the American Medical Association that a section in general practice has been formed. If this section will consider the problems of the family medical adviser and will eliminate technical descriptions of operations, it will be a step forward.

Specialism is here to stay, since the content of medical knowledge is so great that no one man can master it all. Specialists excel because they possess greater skill in the application of certain technical diagnostic and treatment methods. The greatest criticism of specialism is that its practitioners may fail to see the individual who has the disease in their concentrated interest in one field. (It would be ideal if specialists saw only referred patients, since the greatest criticism of operating general practitioners is that they are both judge and jury in deciding on surgical intervention.)

At the University of Minnesota Medical School, therefore, all patients are admitted through the Department of Medicine (not just an admitting service). After a complete history and physical examination and certain preliminary laboratory examinations, men from the other services are called into consultation or the patient is referred. In open hospitals with departmentalized staffs, the same arrangement prevails and the patients

\*I know many medical men who do not operate who are highly regarded.

are either admitted through the medical department or a medical man examines the patient before surgery. Surgeons who criticize this method say it relegates them to the position of technicians, and who are internists that they assume godlike functions?

In recent years, there has been a tendency for physicians in every community to spend their mornings in the hospital performing operations, making rounds on their patients, or in informal consultation. Many hospitals have their scientific meetings in the mornings. The unfortunate part of this arrangement is that it concentrates the physician's office consultations in the afternoon so that he cannot work up his patients properly if he has a large practice. Columbia Hospital, Milwaukee, offers one solution to the problem by the establishment of an Outpatient Department for private patients. Instead of building additional beds when a hospital becomes overcrowded, this hospital builds more diagnostic facilities. Staff physicians may use the hospital examining rooms any time during the day by appointment. They are completely equipped with diagnostic facilities, and nursing service is provided. At the conclusion of an examination, a laboratory and x-ray slip is checked and the patient is taken to the various departments. Emergency service is also provided in the same way.

Students of the problem predict in the future that all physicians in a community will use the hospital facilities for diagnosis, as well as treatment. The number of patients who will be hospitalized will be smaller and the number seen in the outpatient departments will increase. Physicians' offices will be places in which appointments are made and follow-up visits scheduled. With this plan the medical service (versus the surgical) becomes larger, and general practitioners are formed into a special section of general medicine with internal medicine. They are able to get their patients into the hospital at any time on the services they desire since they are admitted through medical service.

The medical schools, hospitals, organized medicine, specialty boards, and prepayment plans should get together and devise a system which will give the man in general medicine a place on a par with the other specialties. In the future physicians should work together to deliver the best type of medical service of which they are capable. Hospital staff organizations will inevitably progress toward limitation of surgical privileges to those who are thoroughly trained. In the interval, adjustments can be made and specialty training should not be curbed until we are certain that we have trained all the men we

need. Artificial restrictions based upon the desires of those who would protect their own position should not be allowed to enter. Organization of groups of general practitioners to fight the specialty movement is unwise.

A profession has for its prime object the service it can render to humanity; reward or financial gain should be a subordinate consideration. The practice of medicine is a profession. In choosing this profession, an individual assumes an obligation to conduct himself in accord with its ideals.

## PRESENT-DAY CONCEPTS OF FRACTURE MANAGEMENT

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It was Ariel the Swiss philosopher who said, "He who does not advance, falls backward." True in almost every field of endeavor, the statement is especially apt in the management of fractures. But advance does not imply the adoption of every newborn contrivance that is introduced by the manufacturer, or acceptance of each automatic device of the commercially minded surgical engineer. It means the continued devotion to unchanging fundamental principles with the added use of such innovations as will facilitate the completion of those principles toward a goal approximating perfection.

It is a confusing thought when confronted with a fracture of the tibia to determine the course of treatment. Shall one immobilize or suspend? Plate or pin? And if pin, shall one use single, dual, multiple, half-pins, beaded ones, or external bridging? And all too often the apparatus at hand is used without proper regard to the particular fracture in question. Thus, it may not be amiss to hark back to fundamentals.

Every medical student has been taught, whether in these words or others, that successful fracture management requires first, reduction of the fracture; second, maintenance of that reduction; and third, restoration of function. This triad of dictates predicates, of course, a complete and accurate diagnosis. But little was ever taught about the primary treatment—the first aid which is usually given by someone other than a physician. Some years ago in a paper on transportation of patients with fractures, I embarrassed the audience as well as myself by asking for a show of hands of those who carried a Thomas splint or other immobilization equipment in their cars. I shall not repeat the question today, yet all of us know that fractures of long bones should be properly immobilized before moving the injured pa-



tient. With the increasing knowledge of first aid by the laity, it behooves the doctor to use greater caution in this direction lest he be subjected to justified criticism.

The problem does not end with the admission of the patient to the hospital, for here there are many errors of management. This sort of occurrence is not uncommon: A patient with a major fracture is admitted to the hospital by ambulance. Lifted from the ambulance, he is placed on a litter, wheeled to a ward, and put to bed. Then the doctor is called. Busy at the moment, the physician unthinkingly orders an x-ray examination believing that it will save him time. The order is promptly carried out and the patient, beginning to recuperate from the jostling of the trip from the scene of accident, is again placed on a litter, wheeled to the x-ray department, lifted to the table, and turned in several directions by the technician so that adequate views may be obtained. Then again the patient is lifted to a cart, bounced through the corridors and finally skidded into bed by a couple of half-pint nurses. If complete disalignment of fragments has not occurred, or serious soft tissue damage increased, the possibility of shock has certainly been added; and yet this is common practice in many hospitals.

The question often arises, "What can a fracture committee in a private hospital do that will not step on the toes of competing doctors, and yet improve the service generally?" Here is one definite item: the instruction of nurses, orderlies and civilian aides in the proper handling of the patient with major fractures.

And now a consideration of the first dictum of fracture management: reduction of the fracture. Again the doctor must curb his zeal of "setting" the fracture to a realization of the fact that he has a patient with a fracture. There is a tremendous difference between the husky young laborer who may have been struck by a falling timber and the eighty-five year old woman found lying at the foot of the cellar stairs. Yet, aside from difference of bony structure incident to age, their fractures from a roentgenologic standpoint might be identical. The general treatment of the patient, then, is of primary importance. Early x-ray examinations are beneficial since they allow the surgeon to evaluate the type of treatment he wishes to follow. However, if the obtaining of these films adds to the possibility of incurring shock, hemorrhage or other soft tissue damage, it is far better to wait for improvement in the condition of the patient. One of the greatest lessons we learned in the recent war, in the management of fractures, was that patients with terrifically compounded and comminuted fractures of long bones could be

moved great distances and over the roughest of terrain, unreduced but adequately immobilized in plaster. They were relatively free from shock because they were free from pain. That treatment was one of military necessity and not one to be advocated for civilian use, yet it should be remembered that when a severely injured individual must be moved a considerable distance to a hospital, the referring doctor could not do better than to disregard reduction but immobilize the fractured arm or leg to the body with a plaster spica. The condition of the patient upon arrival at destination will well justify the time and effort consumed, and the task of the receiving surgeon will be greatly lightened.

Along this line of thought, I cannot agree with a doctor who, having a woman in the eighth or ninth decade with a fractured hip, will say that it is best to leave her alone, that any fixation will only hasten her death. I believe the contrary to be true, that allowing these individuals to suffer the pain attendant to bathing, use of bed pan, and the like produces more shock than a well planned fixation. True, a certain number will not stand even moderate operative reduction, but those who have an adequate fixation are able to have their remaining years comfortable if not expertly ambulatory.

A fracture should be reduced at the earliest possible time that is safe for the well-being of the patient. Muscle spasm and shortening begin the moment the continuity of bone is discontinued and increases often in a few days to a point where the shortening cannot be overcome by other than operative measures. Hence, in fractures involving long bones it is often well to consider the early application of some form of traction while the more general type of treatment is being carried out. If suspension-traction treatment is to be used, then the earlier it is applied the more quickly will reduction be attained.

If immediate manual reduction is to be used, such as to correct a wrist deformity, anesthesia is important. No matter how stoical the patient may be, involuntary muscle spasm augmented by the attendant pain cannot be overcome by simple pull and manipulation, in fact it is increased; therefore the patient should be relaxed. Although infiltration of the hematoma with novocaine has its adherents, I prefer a short general anesthesia. Except in the aged, intravenous pentothal is ideal, but a similar relaxation may be had with nitrous oxide or vinethene. For the introduction of pins or wires, local infiltration is usually sufficient to a depth including the periosteum.

One must now face the problem of using the so-called external fixation devices. To condemn

their use would definitely place one in the category of the horse and buggy era, but by a similar comparison to advocate their universal use would be equal to recommending stratospheric travel for all journeys. In the use of these newer methods of fixation one must weigh the virtues against the catastrophic possibilities. Their use gives a solid fixation, motility to adjacent joints, early ambulation and lessened hospitalization, and freedom from certain conditions which immobilization provokes. Surely these aids are worthy of consideration. On the other hand, the surgeon must contemplate the misfortunes which can arise. These include inadequate fixation from incomplete transfixation of the fragments; distraction from too rigidly held fragments; the movement of soft parts against pins with consequent irritation and possible infection of soft parts and bone; and the human element, wherein the patient may disturb the apparatus when outside the surgeon's control. The use of this type of fixation, then, should be used in selected types of cases where manual fixation is inadequate, where a cooperative patient is a certainty, and lastly when the surgeon is thoroughly familiar with the use of the apparatus and understands the pitfalls and recognizes the dangers.

One cannot completely separate the term maintenance of reduction from the phrase adequate reduction except in didactic teaching. Nor, for that matter, can the fact of maintaining the reduced fracture be apart from consideration of restoration of function. All should merge into a continuity of effort. It is common sense that after a fracture is reduced it must be held in that position until sufficient callus has enveloped the fracture site to preclude distortion of alignment or refracture. However, no longer is the "tailor-made" tin mold adequate to insure success, nor is the padded board a secure dressing. Plaster of paris has been used for many years and, properly applied, it gives splendid fixation. Plaster cannot be wound on an extremity in a haphazard manner; it must be carefully molded, padded over bony prominences and superficial nerves, and split if there is any possibility of postreduction swelling. Plaster of paris is an unyielding substance and may cover progressing soft tissue damage unless carefully observed. In the majority of cases the joints, proximal and distal to the fracture, should be immobilized, at least in the first plaster application. Frequently, in cases requiring long immobilization, the plaster will have to be changed for disuse atrophy often causes a well fitting plaster to become loose and its efficacy will be lost.

Another type of fixation is by means of open operation, and here again a variety of methods

is used. An open reduction to be successful demands anatomic reduction, and its use ordinarily should be reserved for those cases in which non-operative methods have been given trial. Such happenings as interposition of soft tissue between fragments allow no other form of successful treatment, but the plating of a simple long bone fracture gives too many possibilities of complications to be advocated. The newer types of plates, screws, and nails, which limit local bone destruction by their metal composition, have made such procedures far safer than in the past. Again, fixation by plaster or a substitute is necessary during the healing period. There can be no schedule laid down as to the length of time of immobilization. It is known that the older the patient, the longer must immobilization be continued. Other factors influence time of healing, such as the site of fracture and whether comminution has occurred. Of great importance, too, is the dietary regimen of the patient with fracture. It is good practice to augment the diet with an all inclusive vitamin substance, and the use of supplemental calcium and phosphorus, either as added milk or in tablet form, will aid toward bone formation.

It was formerly the practice to consider the surgeon's duty ended when the fracture had been reduced and immobilized. At the end of a predetermined time the maintaining element was removed, and then it was the patient's own job to rehabilitate himself. We now know that this problem, the restoration of function, is of equal importance to securing an adequate reduction and maintaining it during the healing period. In fact, a patient with a Colles's fracture, unless otherwise instructed, may have serious limiting disability of fingers and shoulder. It cannot be too often repeated that in immobilizing the forearm because of such fracture, no apparatus, be it splint or plaster, should extend beyond the palmar crease. The patient should begin immediately the use of the fingers and should have early elimination of the sling because circulation will be stimulated by the use of the arm. Daily exercises including swinging the arm overhead and frequent bending at the elbow will keep these parts vitalized and lessen disuse atrophy. These instructions are most important in the older group of patients who, because of early pain, are loathe to want to move the part. There is no more distressing sight than that of stiff, shiny, atrophic fingers following an excellently reduced wrist fracture, and there is no patient more difficult to rehabilitate.

There are many types of treatment available following removal of the maintaining apparatus, all coming under the general classification of



physical therapy. This is a specialty of itself but every physician doing fracture work must have some knowledge of its use, and misuse. Massage has its place, but it is actually a lazy person's means of exercise and usually some form of active motion is to be preferred. Heat is of great benefit for it is analgesic and a circulatory stimulant. Whether heat is administered by infra-red, diathermy, whirlpool bath or moist applications, it should always be used to hasten return of function. The use of weights and pulleys has not had the usage that its value deserves. By the construction at home of simple devices which the patient can use, he may improve movement much more rapidly than awaiting his daily or semi-weekly visit to the doctor's office for a quick treatment and then spend the interim in idleness.

A valuable piece of apparatus for the physician to have in his office, and quite economical, is a goniometer to measure range of motion in joints. It is difficult for one to remember what degree of motion was present the last time the patient was seen. With such an instrument the doctor can measure and record the progressive improvement in the patient's condition. Its psychic effect is likewise worthwhile, because frequently a patient becomes discouraged at the lack of speed of recovery and he will watch with interest the progress made. We keep a scale on the wall in the examining room for use of patients who are restoring shoulder motion. The gain of an inch or two in reaching upward often sends a patient home knowing that his improvement is progressing. There are many other simple aids which tend to restore the mental as well as the physical well-being.

The present-day concept of fracture management, then, is that because of a fracture an individual has been deprived of every day activity; that this fracture must be accurately reduced by a method which will not jeopardize his complete recovery but will produce normal function with a minimum of pain and discomfort, allow early ambulation, and insure mental ease; and that, finally, he will be given all aids possible in the restoration of function to the injured member and complete rehabilitation to his former manner of living.

## THE CLINICAL SIGNIFICANCE OF THE RH FACTOR

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At the beginning of the twentieth century the work of Landsteiner and of von Decastello and Sturli defined the four groups of human blood. It was found that these groups are determined by the presence or absence in the erythrocytes of the specific agglutinogens A and B. These substances are polysaccharides which differ from each other in chemical structure but have general similarities to other antigens in nature, such as the antigens in the capsule of the pneumococcus which determines its type. When blood cells contain only the A substance they belong to group A. When they have the B substance they are group B. If both substances are present in the corpuscles, group AB is determined. In the absence of both specific substances, the cells belong to group O. In addition to the agglutinogens in the cells, the plasma of certain groups contains natural agglutinins which are antibodies reacting with specific agglutinogens to cause the clumping of cells. Group A blood contains anti-B agglutinins; group B blood has anti-A agglutinins. Group AB blood can have neither agglutinin, whereas group O blood contains both the natural agglutinins.

The distribution of the A and B substances in the blood of the individual is determined by chromosomal inheritance and therefore is unaltered by practically any condition which occurs during life. The A or B substance in the erythrocytes can be derived only from the chromosomes of one or both parents.

Landsteiner developed the concept of the individuality of blood still further. He searched for evidence of agglutinogens which were not demonstrated by the usual crossmatching of human bloods because of the lack of natural agglutinins. In 1928 he and Levine reported another system of agglutinogens. Each human blood can be classified as to whether the cells contain the agglutinogens M, N, or MN. This is accomplished by the use of animal immune sera because there are no corresponding natural agglutinins in human blood. The distribution of types in this system occurs by a chromosomal mechanism which is entirely independent of the inheritance of the units of the A-B-O system of groups. The cells of group A blood, for example, contain M, N, or MN. Another system of blood types was demonstrated which depends on the presence or absence of the agglutinin P. This also is a matter of inheritance.

### CHANGE OF ADDRESS

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From the Department of Internal Medicine, State University of Iowa College of Medicine, Iowa City.

While searching for more agglutinogens Landsteiner and Wiener in 1940 reported preliminary observations on another system of blood types which depends on the presence or absence of the Rh factor. Rabbits were immunized by the injection of erythrocytes from rhesus monkeys. The agglutinins thus formed were tested against human red corpuscles and it was found that the erythrocytes of about 85 per cent of white persons were agglutinated by them. These were designated as *Rh positive* whereas the inagglutinable bloods were *Rh negative*. Subsequently at least eight subtypes of Rh were identified and shown to be inherited according to the laws of Mendel.

Studies of the Rh factors led to the demonstration of the fact that human beings can become sensitized to the antigens contained in the red corpuscles of other individuals. To this phenomenon has been given the name of *isoimmunization* or *isosensitization*. Occasionally any of the agglutinogens now recognized in human erythrocytes may serve as antigens. There are at least two possible routes by which a human being may come in contact with the antigens in the red blood cells of another person; namely, by repeated blood transfusions or by repeated pregnancies. Isosensitization, thus acquired, may be manifest in either of two forms: by hemolytic transfusion reactions or by the development of hemolytic disease of the newborn (erythroblastosis fetalis).

Examples of each of these cases will be mentioned in which the Rh factor serves as an antigen. Let it be supposed that the patient belongs to group A and is one of the 15 per cent of white persons who are Rh negative. He is given a series of transfusions of group A blood which is unselected insofar as the Rh type is concerned. The chances are that most of the transfused bloods will be Rh positive. The first few transfusions are well received with no reactions. Perhaps the fourth is accompanied by a slight chill, but there is no evidence of gross hemolysis. The fifth results in a more severe reaction with chills and fever. The sixth transfusion is accompanied by the signs and symptoms of explosive intravascular hemolysis, which may result fatally. By proper serologic methods it can be shown that the recipient has developed acquired anti-Rh agglutinins from the repeated injection of the Rh factor.

In the case of the female recipient who is Rh negative, several transfusions of Rh-positive blood may not produce hemolysis but may lead to the formation of anti-Rh agglutinins, so that when she later conceives a fetus which is Rh positive, the offspring will develop erythroblastosis fetalis.

If the sensitizing transfusions are given before the first pregnancy, the first offspring may be a victim of the disorder.

Sensitization by blood transfusion, therefore, may result in either hemolytic transfusion reactions or in erythroblastosis fetalis. Likewise, sensitization by pregnancy may result either in hemolytic disease of the newborn or in hemolytic transfusion reactions.

Sensitization by pregnancy is somewhat more complicated. The Rh factor is a Mendelian dominant character so that the chances favor a woman who is Rh negative marrying a man who is Rh positive. Actually this pattern occurs in about 10 per cent of marriages. If the husband is Rh positive he may be either homozygous or heterozygous. That is to say, all his genes may contain the Rh factor, in which case all his offspring will be Rh positive, or half his genes are Rh negative and then half the offspring may be Rh negative.

A common history is that of the Rh-negative woman who is married to the homozygous Rh-positive man. The first one or two pregnancies result in normal children, who are Rh positive. The third or fourth child may be born alive but it has jaundice and a severe grade of anemia which may result fatally or terminate in a slow recovery. Further pregnancies result in abortions.

Most of the links of evidence are now available to explain the mechanism of erythroblastosis fetalis. By some means the antigenic Rh factor in the red corpuscles of the fetus leaks across the placental barrier into the blood stream of the mother where it stimulates the production of anti-Rh agglutinins. These antibodies diffuse back through the placenta and cause variable degrees of hemolytic anemia in the fetus. If the destruction of blood is great, an abortion results. If the lesser degrees of anemia are produced, the child may survive.

In the case of the heterozygous father, the Rh-negative offspring which are born of the sensitized mother are not affected by the antibodies. Cases have been reported of the birth of fraternal twins in which the Rh-negative member was normal and the Rh-positive individual, simultaneously, had erythroblastosis fetalis.

The woman, herself, who is sensitized to the Rh factor by pregnancy suffers no manifestations unless she becomes the recipient of a transfusion of Rh-positive blood, in which case the donor's blood is agglutinated and hemolyzed by the antibodies of the patient, with serious results.

A list of agglutinogens in order of diminishing antigenicity is as follows when sensitization oc-



curs by transfusion: A and B, Rh, Hr, M, and P. When sensitization occurs by pregnancies, the list is slightly different: Rh, Hr, and A and B. This order is arranged because of several considerations. When a person of group A inadvertently receives a transfusion of group B blood and he survives, there is a great increase in the titer of anti-B agglutinins within a few weeks. This is taken as evidence that the B substance is a good antigen. The same conclusion can be drawn for the A substance. Compared to these agglutinogens the Rh factors are inefficient antigenically. In a series of over 5,000 successive transfusions at the University Hospitals it was found that only 6 per cent of the Rh-negative recipients who received four or more blood transfusions became sufficiently sensitized to cause clinical reactions. In perspective, this means a reaction rate from sensitization to the Rh factor of one in 1,000 transfusions. The Hr factor is responsible for a still smaller number. There are very few instances in the literature where the M substance has been proved antigenic.

In isosensitization by pregnancy the relative antigenicity is somewhat different because the Rh factor is the most common antigen incriminated. About one pregnancy in ten occurs with an Rh-negative mother and a father who is Rh-positive, the pattern in which sensitization to the Rh factor is expected; but only one delivery in 250 results in an infant with erythroblastosis. This indicates that only one in 25 of the Rh-negative mothers becomes sensitized to the antigen.

Special serologic tests have been developed by which Rh-positive and Rh-negative blood can be typed. Procedures also are available for the detection of anti-Rh agglutinins in the blood serum of the sensitized person. The clinician will wish to know what use can be made of these tests in the prophylaxis and treatment of isosensitization.

Isosensitization to the Rh factor by transfusion can be prevented if all the recipients are typed and if Rh-negative blood is always given to Rh-negative recipients. This will not prevent the rarer cases of sensitization to other agglutinogens. Without determining the Rh type, severe transfusion reactions due to the anti-Rh agglutinins can be prevented by the employment of special methods of crossmatching. This procedure should make transfusion safe for the recipient who is sensitized to the Rh factor. It does not, however, prevent sensitization of a woman who later may become pregnant and, as a result, have an infant with erythroblastosis. It is therefore safest to determine the Rh type of all women of childbearing

age before giving them transfusions, except in emergencies.

The obstetrician and his pregnant patient will wish to know if there is any likelihood of the development of erythroblastosis fetalis during the current pregnancy. Typing the blood of the husband and wife will demonstrate whether the distribution of Rh types is such as to make the isosensitization likely. If the pattern is compatible with the possibility, the blood serum of the mother can be tested monthly during the last trimester. It is possible, at times, to predict the development of erythroblastosis, while the fetus is in utero, by noting a monthly increase in titer of anti-Rh agglutinins in the blood of the mother. If the infant is born alive with the manifestations of hemolytic disease of the newborn, prompt treatment may save it. Although the child is Rh positive, its tissues are saturated with anti-Rh agglutinins from the mother. Therefore it should be transfused with Rh-negative blood. If known Rh-negative blood is not immediately available, it is always safe to transfuse the washed red corpuscles of the mother after they have been resuspended in saline solution.

Finally, when a woman has had several normal children followed by one with hemolytic disease of the newborn, she wishes to know if there is a chance of further viable offspring. The answer to this question depends on whether the husband is homozygous or heterozygous. In the former case there is no hope, but in the latter a more cheerful prognosis can be extended. Typing the blood of the surviving children occasionally will demonstrate that some are Rh negative. This means that the husband is heterozygous and there is a chance that more Rh-negative offspring will occur and they, of course, are free from erythroblastosis. The possibility that some of the children are illegitimate must be kept in mind in drawing conclusions.

#### Discussion

**Dr. Allen C. Starry, Sioux City:** In his discussion of the Rh factor, Dr. DeGowin has clearly developed the picture of all agglutinogens and has ably presented the problems involved.

Anyone who has taken responsibility in many transfusions is always concerned with the more severe reactions that beset his path. Many such reactions have been unexplained and the discovery of the Rh factor reduces that number of unknowns and also points the way of avoiding them.

In my experience in grouping and crossmatching blood for transfusion in the general hospitals, I have experienced moderately severe reactions and an occasional fatal one in which no explanation could be found for such reaction. The Rh factor presents

one more working point, and with its full application a few more reactions can be avoided and certainly fatal hemolytic cases of this type also can be avoided.

At the present time all donors and recipients are grouped and crossmatched and the Rh factor determined; wherever possible Rh-negative recipients are given Rh-negative blood, and especially women in the childbearing age.

With the laboratory methods now available it is possible to diagnose every case of congenital hemolytic disease or at least to exclude the diagnosis. In the case of an Rh-negative mother carrying an Rh-positive fetus, we may even predict whether the fetus will develop erythroblastic symptoms by checking for the anti-Rh factor from time to time and determining if such antibodies are developing and increasing in the mother's blood. We are able to point out the dangers due to isoimmunization to one or more of the Rh factors, the Hr factor, or the A-B-O factor.

Future work, we hope, will concern itself primarily with the prophylaxis and treatment of congenital hemolytic disease. This problem will never be completed until effective methods have been discovered to treat sensitized Rh-negative women so that they are capable of bearing healthy Rh-positive infants.

Dr. Frederick H. Lamb, Davenport: We are all indebted to the essayist for a better understanding of a rather difficult technical subject. His presentation achieves that balance between comprehensiveness and condensation which is so desirable—yet so elusive.

The questions which have come up frequently in purely clinical discussions of this subject are: What is the clinical application of the Rh factor reduced to its simplest form? What can be done about it?

I have tried to answer these questions in a few sentences, as follows: 1. The Rh factor is a permanent, static antigenic substance which is present in the red blood cells of about six out of seven white persons. 2. The seventh, or Rh-negative individual, may become sensitized to this substance by blood transfusion; or, if a woman, by pregnancy, by blood transfusion, or by both. 3. To avoid the possibility of most intragroup transfusion reactions, Rh-negative persons receiving multiple whole blood or red cell transfusions should receive blood from Rh-negative donors. 4. The lives of some babies with erythroblastosis may be saved by the transfusion of blood from Rh-negative donors, preferably, or the mother's blood may be used if the cells are suspended in salt solution or suitable plasma other than her own. 5. The first child of an Rh-negative mother may be erythroblastic if the mother has been previously sensitized by transfusion. 6. The simplest way to meet most clinical problems arising from the Rh factor is to have available several Group O, Rh-negative donors.

In closing, I should like to add a word of caution to those who are making or are responsible for Rh

tests. The demand for Rh-typing sera far exceeds the current supply with the result that some of the sera on the market is so impotent as to be unreliable.

## AVIATION DEAFNESS

BYRON M. MERKEL, M.D., Des Moines

When a previously unrecognized or undescribed condition is first studied, described and named, it is often surrounded by an air of mystery. It is presumed to be due to the action of new or different forces on the human mechanism. Only after considerable study and speculation are the more familiar aspects recognized and the condition properly placed in the general concept. Aviation deafness is no exception to this practice, and only recently has it been headed for its proper place in otology.

The purpose of this paper is to present a concept of the mechanisms which produce ear symptoms in those who fly. This concept is based on personal experiences of the author as a flight surgeon in military aviation in this country and in combat in foreign service, as a passenger in commercial aviation, and from a review of the rather voluminous literature dealing with the subject.

Aviation deafness is traumatic deafness. The ear symptoms which result from flying are traumatic symptoms. There are two kinds of trauma involved: acoustic trauma from intense prolonged acoustic stimuli, and barotrauma from uncompensated changes in barometric pressure.

Acoustic trauma in the aircraft results from the noise produced by the exhaust of the motors, the motion of the propellers, the passage of the slip stream, the vibrating parts of the aircraft, and from the radio and intercommunication system. This trauma produces fatigue and damage to the cochlea and certain changes in the middle ear, depending upon the intensity, frequency, duration, and character of the sound, as well as the susceptibility, age, physical condition, and the condition of the ears of the recipient.

In general, my experience has confirmed the idea that auditory fatigue follows the laws of nerve fatigue. The duration of the fatigue, as judged by the after image of the 1,000 cycle tone of a radio beam, varies directly with the square of the time that the stimulus was applied. This working concept was presented by Campbell and Hargreaves<sup>1</sup> in 1940.

Abnormal susceptibility of fatigue to auditory stimuli seems to be present in certain individuals at all ages, and in many individuals at ages past fifty. Fowler<sup>2</sup> has suggested that abnormal sus-

<sup>1</sup>Presented before the Ninety-Fifth Annual Session, Iowa State Medical Society, Des Moines, April 18 and 19, 1946.



ceptibility can be determined if the individual shows a demonstrable change in hearing after being subjected to a masking noise of 65 decibels level for twenty minutes. If this test is positive, the individual should be warned to avoid acoustic trauma.

The diagnosis of deafness from acoustic trauma (boilermakers' deafness) is generally made in an apparently normal ear when a tonal dip at any frequency above 1,024 persists. The most common location is at 4,096. This dip tends to spread out fanwise and soon involves the speech range. Loch<sup>3</sup> and Senturia<sup>4</sup> suggested that this concept should be reconsidered, since they found many tonal dips in children, animals, and adults who had had no previous acoustic trauma.

The noise levels in aircraft have been measured by Hargreaves, Campbell, and others and found to be from 60 to 80 decibels in the passenger cabin of the DC-3, 100 decibels in a closed cockpit plane, and 130 decibels in an open cockpit plane. In general, noise levels of less than 80 decibels are not considered to be productive of significant auditory damage. We may, therefore, conclude that acoustic trauma is of most significance to crew members in commercial aircraft, and crew members and passengers in the usual military aircraft. To the passenger in a modern commercial aircraft this phase of the problem is of almost no importance.

Treatment of deafness from acoustic trauma should be directed to prevention of acoustic insults in all individuals and the elimination of the trauma in those who are abnormally susceptible. The use of cotton ear plugs, rubber plugs, or tight fitting earphones will give between 10 and 25 decibels protection against noise.

Barotrauma is a term which is widely used by our British colleagues to describe the trauma resulting from changes of barometric pressure. The otitis which is produced by this trauma is known as baro-otitis, while in this country it was first described by Armstrong in his text on Aviation Medicine and the name aero-otitis was selected.

Aero-otitis is the most common ear syndrome produced by flying. It affects both the passengers and crew members. It rarely results in permanent deafness but is the basis for the most troublesome complaints from the average flyer. It is produced by failure to ventilate the middle ear properly to compensate for changes in barometric pressure.

Standard barometric pressure at sea level is 760 millimeters of mercury. At 5,000 feet the pressure is 632 millimeters of mercury; at 10,000 feet, it is 522, at 20,000 feet, 349, while at 40,-

000 feet it becomes 140 millimeters of mercury. Therefore, to maintain equal pressure on both sides of the drum, the ventilation of the middle ear must equalize a pressure differential of 128, 110, 173, and 209 millimeters of mercury in changing from sea level to 5,000, 10,000, 20,000 and 40,000 feet, respectively.

In order to understand the production of these changes, one must remember that in the normal ear it is much easier for air to pass from the middle ear into the nasopharynx than from the nasopharynx into the middle ear. This is due to the structure and normal physiology of the eustachian tube. It explains why in flying over 98 per cent of the aero-otitis is produced from descent. Serious symptoms from even very rapid ascent are so rare that they constitute a curiosity.

In ascent, at the rate of 5,000 feet per minute without opening of the eustachian tube, the pressure inside the tympanum will be 3 to 5 millimeters of mercury higher than the outside at 200 feet, 10 to 15 millimeters higher than outside at 500 feet, and 15 to 30 millimeters higher than outside at 1,000 feet. A negative pressure of over 5 millimeters of mercury will cause the drum to bulge outward, producing a sensation of slight fullness and decrease in auditory acuity. The eustachian tube is opened either by this pressure differential or by swallowing, and the excess pressure is relieved by the escape of a bubble of air into the nasopharynx. This is accompanied by a slight tickling in the pharynx after which the symptoms disappear. This cycle is repeated easily, and normally provides ear comfort in ascent.

In descent, the pressure differential is reversed. Air must enter the middle ear to equalize the increasing barometric pressure of the lower altitudes. If the pressure is not equalized, we find these signs and symptoms: At a differential of 30 millimeters of mercury, congestion and fullness of the drum with some decrease in hearing; at 60 millimeters, severe pain is added and tinnitus is often present; at 80 millimeters, the pain radiates into the neck and shoulder; at 100 millimeters, the syndrome of the "locked tube" is present; at 128 millimeters, tissue damage, hemorrhage in the drum or tympanum; and, at 238 millimeters, rupture of the drum.

These changes may be acute or chronic. The cycle may be interrupted at any point or go on to the serious complications of otitis media. The changes may be studied and treated in the low pressure chamber. They may be observed in the diver, and to a lesser degree in the mountain climber.

Three atypical types of cases deserve mention.

The reversal of the normal valvelike action of the eustachian tube may result from partial strictures of the tube, hyperplastic changes near the tympanic opening of the tube, and in the case of loose flabby drums. These cases have pain on ascent, but on descent the drum simply collapses against the medial wall of the tympanum and no pain is experienced. The "choked labyrinth" is a Ménière's syndrome resulting from the direct effects of severe barotrauma on the labyrinth. These two types are rare. A more common type is the psychosomatic disorder. These cases result most often from a repressed fear of flying and have very bizarre groups of symptoms added to any of those syndromes previously described. It is important to recognize the true cause of this type of case. In most of the cases the individual thus afflicted will demonstrate his inadequacy by other traits, and should be relieved of duty involving flying.

In order to treat aero-otitis properly, one should keep in mind certain factors in the production of the condition. The predisposing factors, certain anatomic considerations, and a review of the physiology of the eustachian tube point the way to proper treatment of aero-otitis.

From the anatomic point, one should remember that the eustachian tube is an inverted "S" shaped structure, not a straight tube, extending from the middle ear to the nasopharynx. Its course is more direct in infants, and more tortuous in adults. The length of the tube is 31 to 38 millimeters ( $1\frac{1}{4}$  to  $1\frac{1}{2}$  inches). The cartilaginous portion is 24 to 25 millimeters long, while the osseous portion is from 11 to 12 millimeters in length. It passes from the pharyngeal orifice at an angle of 45 degrees. This orifice is from 1 to 2.5 centimeters lower than the tympanic orifice. The tubal cartilage is in the form of an elongated triangular sheet. Near the pharyngeal opening it is shaped like an inverted "L," while lateral to this it becomes deficient in its superior and anterior walls. The mucosa of the cartilaginous portion is lined with pseudo stratified ciliated columnar epithelium and is corrugated in appearance from the invaginations developed by lymphoid tissue in the tunica propria.<sup>5</sup>

From the physiology of the eustachian tube, one should remember that the tube is normally closed, opening on swallowing, yawning or sneezing.<sup>5,6</sup> It is important to remember also that the normal rates of swallowing are: Infant, awake, five per minute; asleep, one every three minutes; and eating, twenty per minute. Adult, awake, one per minute; asleep, one every five minutes; and chewing, one to thirty in thirty seconds.

Increase in pressure of air at the pharyngeal orifice of the tube can be produced by:

1. Valsalva's maneuver.
2. Politzer's maneuver.
3. Catheterization, with positive pressure.
4. Blowing the nose.
5. Sneezing.
6. Coughing.
7. Yelling.
8. Rapid, forced expiration.

Pressure at the pharyngeal orifice of the tube can be decreased by:

1. Swallowing, while holding the ala nasi tightly closed.
2. Rapid, forced inspiration.
3. Catheterization with negative pressure.

Opening of the pharyngeal orifice and lumen of the tube can be encouraged by:

1. Swallowing.
2. Yawning.
3. Suppressed yawn.
4. Chewing.
5. Lateral movements of the jaws.
6. Pointing up and to the shoulder with the chin.

With these facts in mind one can see that the following factors can predispose the development of aero-otitis:

1. Carelessness or ignorance in opening the eustachian tube.
2. Descent while suffering from an acute upper respiratory infection.
3. Excess lymphoid tissue in or around the eustachian tube.
4. Previous otitis media, either acute or chronic.
5. Unconsciousness during descent, from sleep, shock, or anoxia.
6. Preoccupation with duties in flight.
7. Very rapid descent—more than 500 feet per minute.
8. Scarring of the pharyngeal end of the tube after surgery.
9. Septal spurs or posterior polyps.
10. Allergic reactions, either local or general.
11. Hypertrophied faucial and/or pharyngeal tonsils.
12. Tumors of the nasopharynx or eustachian tube.
13. Paralysis of the ninth or tenth cranial nerves.
14. Malocclusion.

The treatment of aero-otitis is easily divided into three classes: prevention, treatment of the mild case, and treatment of the severe case.

Preventive treatment should begin with educa-



tion of those who fly. The mechanism of the development of the ear symptoms in flight should be explained in simple terms. The methods of opening the eustachian tube should be demonstrated. The low pressure chamber offers a good method for demonstration of these facts, as well as an excellent adjunct in the treatment of the early or moderately severe case. For the individual who flies as a passenger in commercial aircraft, the use of chewing gum is all that is necessary since the rates of descent are limited to 300 feet per minute by regulation of the Civil Aeronautics Administration. The use of pressurized cabins is expected to enable planes to descend more rapidly without increasing the pressure differential too much. For those who will fly while suffering from an upper respiratory infection, the use of one of the volatile vasoconstrictors such as the benzedrine inhaler will help to prevent trouble with the ears. Those who sleep during flight should be awakened before descent is started, and their swallowing rate increased by serving hot drinks or by the use of chewing gum. Proper treatment of lymphoid tissue which is in or near the tube opening is indicated. This includes consideration of irradiation, using radium as suggested by Crowe and Fowler.

Treatment of the mild or severe case must be conservative to produce best results. Time is our greatest friend. Gentleness is the keynote of the treatment. In the case of rupture of the drum, the treatment is that of any traumatic rupture and can be concisely stated as "hands off the ear."

In the mild or moderately severe case, one must remember the anatomy and physiology involved. The pressure differential is established, and efforts should be directed to opening the tube gently. The nasal mucosa should be shrunk with a vaso-motor constrictor such as  $\frac{1}{2}$  per cent ephedrine in normal saline,  $\frac{1}{4}$  per cent neosynephrine or 1 to 2 per cent tuamine in the Proetz and Fowler position. The application of a bland warm oil to the canal and the use of external heat are usually very soothing and are to be recommended. Catheterization, if it can be done gently and under direct vision, should be considered. The use of the Valsalva or Politzer methods of inflation has two disadvantages. First, it is impossible to control accurately the amount of pressure used, and in the case of the real "locked tube" this procedure serves only to increase the tightness of the locking. Shea recommends puncture of the drum with a fine sterile needle in cases in which other methods fail to equalize the pressure. The

use of the Proetz treatment has proved to be of great value;  $\frac{1}{2}$  per cent ephedrine in normal saline is used.

Return to flying after rupture of the drum should be permitted only when the drum is healed and normal ventilation of the middle ear is restored. Catheterization and the use of the pneumatic otoscope are recommended for determining this condition. Aero-otitis cannot develop in the presence of an open drum, but the open drum removes some of the normal protection for the inner ear against loud noises and vestibular stimuli; therefore, people with perforated drums should not fly as pilots.

#### CONCLUSIONS

Aviation deafness, when stripped of its glamour, is found to be a summation of the problems of traumatic deafness. The trauma may be acoustic or barometric, or both. The factors responsible for its development are considered. The treatment, based on adequate consideration of the anatomy and physiology of the hearing mechanism, is discussed. Conservatism is strongly recommended in the treatment of aero-otitis. It presents a challenge to the otologist—to review the treatment of traumatic conditions of the ear and to see that it is based on an adequate understanding of anatomy and physiology of the hearing mechanism.

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COLLEGE OF MEDICINE  
CLINICOPATHOLOGIC CONFERENCE

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ABSTRACT OF CLINICAL HISTORY

The patient, a white male twenty-six years of age, entered the University Hospital November 11, 1945, and died February 19, 1946, the 102nd day of his hospitalization. All his life had been spent on an Iowa farm. He was unmarried, and, following the death of his mother in 1940, he and his father had lived alone. The farm work apparently demanded all their time and attention so that they relegated the details of their personal existence, such as the preparation of food, to a secondary place.

The story which the patient told on admission was sketchy but sufficient detail was obtained to picture clearly the events which led to his death. Sixteen years before his parents had taken him to a physician for reasons which he no longer remembered, but they were informed at that time that he had diabetes mellitus. His treatment for the two following years consisted of an unexactly restricted intake of sweet and starchy foods. At the end of that time he was placed on an unknown amount of insulin. He never made any real attempt to follow a regulated diet. His urine was tested once each year on his annual visit to the doctor. This state of affairs continued for eleven years without the development of any of those complications which usually plague the uncontrolled diabetic. In 1940 he was hospitalized but did not remember why this was necessary. Upon discharge he returned home and took up where he had left off in the mismanagement of his diabetes. Three and one-half years later he was again hospitalized, this time because of a carbuncle on his back. Soon after entering the hospital he became unconscious and thus remembered little that took place. He remained in the hospital about six weeks, during which time an attempt was made to teach him something about diabetes, but this was apparently unsuccessful.

The patient was told after this hospitalization that he had kidney disease, and during the next one and one-half years preceding his admission to the University Hospital, other complications appeared. First he noted fluctuations in acuity of vision which could not be corrected with lenses. About a year later his ankles began to swell in the daytime but he did not consult a physician until five weeks later (three weeks before admission). The reason for seeking advice was short-

ness of breath which came on either when he attempted tasks previously accomplished with ease or at night when he was awakened abruptly from a sound sleep. Some medication was prescribed and he subsequently obtained relief from these symptoms. However, he began to suffer from headache and frequent nose bleeds and was overcome by lethargy and anorexia. Now and then he vomited after eating and usually the vomitus contained coffee-ground material. He consulted another physician and again was told that he had kidney disease.

On specific questioning the patient could not recall any symptoms referable to kidney disease except nocturia of once a night all his life which could have been caused by the diabetes. Although he had a "cold" just before the onset of shortness

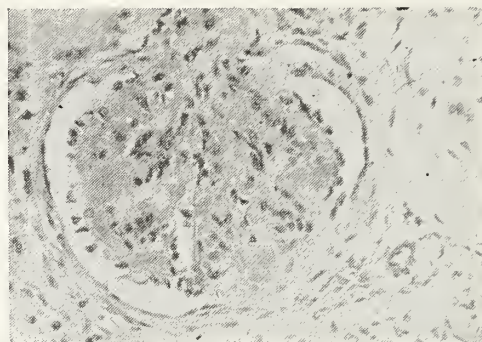


Fig. 1. Glomerulus with focal intercapillary hyalinization and moderate diffuse fibrosis. There is an adhesion across the glomerular space.

of breath, upper respiratory infections had been infrequent and sore throat unknown in his experience. Neither had he ever had any symptoms of rheumatic infection.

Examination at the time of entrance showed a pale, white male who was acutely ill and very difficult to arouse. The temperature was 101 degrees (rectal), the pulse rate 114, and the respirations 24 per minute. The skin was dry and there were many small, scabbed areas of superficial infection on the arms and legs. Just inside the hairline in the left frontal area, there was a crusted lesion from which pus exuded on pressure. On the back there was a large scar (8 centimeters in diameter), the site of the carbuncle he had mentioned. There was pitting edema from the feet to the level of the tenth rib. Examination of the ocular fundi showed a retinitis with thin wiry arterioles, exudates, and one flame-shaped hemorrhage in the right eye. The tongue was dry. The lungs expanded normally and were not increased in density. There were many coarse râles in both bases. The cardiac apex was located in the sixth interspace at the anterior axillary line. There was no visible



overactivity of the precordium. A systolic murmur was heard at the apex and there was also a pericardial friction rub, best heard in the third interspace just to the left of the sternum. The abdomen was distended and shifting dullness was easily demonstrated. The liver and spleen were not felt. The blood pressure measured 200/130. Except for the presence of edema, the rest of the examination added nothing.

The following laboratory studies were made on the day of admission:

Urine: albumin 3+, sugar 3+, blood 0, acetone 0, and microscopic examination, negative.

Blood: Hemoglobin 8 grams per 100 cubic centimeters, erythrocytes 2.5 millions per cubic millimeters, leukocytes 8,400 per cubic millimeter, urea nitrogen 48 milligrams per 100 cubic centimeters, creatinine 4.5 milligrams, total proteins 7.85 grams, sugar 400 milligrams.

X-ray examination of the chest showed cardiac enlargement with a minimal degree of pulmonary congestion.

The patient was placed on a daily diet of 70 grams of protein, 116 grams of carbohydrate, and 151 grams of fat, and was given regular insulin in daily dosages of 30-10-20 units. The intake of fluids was limited to 2,000 cubic centimeters daily and 1.0 gram of ammonium chloride was administered three times daily. On the third and fourth hospital days he received Mercurhydrin, 1 cubic centimeter intramuscularly. On this regime he lost edema fluid, totaling twenty pounds in twenty days, and appeared somewhat better. The temperature, which was 101 degrees (rectal) on admission, declined to normal in a week and the shortness of breath was alleviated. The cardiac rate remained fast, although the rhythm was regular. The nitrogen retention persisted in spite of the diuresis.

No vigorous attempt was made to render the urine sugar-free. He was maintained on the diet recorded and 25-5-10 units of insulin. The values for blood sugar fluctuated between 92 and 372 milligrams per 100 cubic centimeters. Numerous examinations of the urine revealed the same findings as on admission. There was always a marked albuminuria and casts could be found in fresh specimens. On only one occasion was hematuria discovered. From time to time the patient vomited and often the vomitus contained partially digested blood. Blood transfusions were given on three occasions but the severe secondary anemia continued. The differential leukocyte count was normal. The blood pressure was stabilized at 180/125.

The infection in the scalp proved refractory but

finally responded to drainage and the administration of penicillin. He was allowed to be up and about as he pleased and remained essentially the same except for a slight increase in nitrogen re-

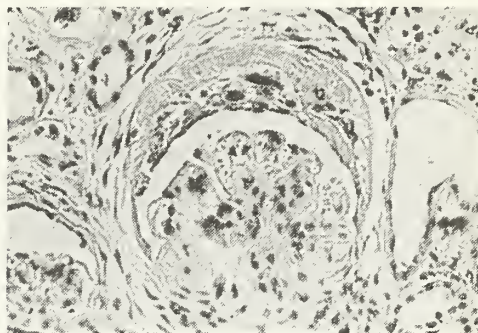


Fig. 2. Glomerulus with an epithelial crescent.

tention (urea blood nitrogen 60.9 and creatinine 6.2 milligrams per 100 cubic centimeters) until February 14, 1946. On that day, while walking down stairs, he slipped on the last step and fell, injuring the left knee. X-ray examination revealed a comminuted fracture in the supracondylar region of the femur. This was treated with a posterior molded splint. The patient's condition, following this accident, was progressively worse. There was no fever but he developed urinary retention, refused to eat, vomited repeatedly, and was troubled with hiccough. He died on February 19, 1946.

#### CLINICAL DISCUSSION

*Dr. R. C. Hardin, Department of Internal Medicine:* On admission to the hospital this patient presented a complex of uncontrolled diabetes, cardiac decompensation, and renal failure. These constituted no diagnostic problems since they were evident from the history and physical examination and were confirmed by laboratory tests. The real problem was to determine the interrelationships of the three. In other words, did the patient, because of diabetes, have precocious arteriosclerosis with nephrosclerosis and arteriosclerotic heart disease? Or did he, after repeated infections incident to poor diabetic control, have chronic glomerular nephritis with attendant hypertensive cardiovascular disease? Or did he have some more closely knit clinical syndrome sufficiently characteristic to be recognized as an entity?

First, what evidence is there in support of the diagnosis of chronic glomerular nephritis? The entire picture (exclusive of diabetes mellitus)—albuminuria, cylinduria, uremia, secondary anemia, and hypertensive cardiovascular disease—can be explained on that basis. However, specific ques-

tioning failed to elicit the history of an attack of acute hemorrhagic nephritis. Neither had the patient experienced any of the infections which commonly are regarded as precursors of kidney damage (e.g., streptococcal involvement of the upper respiratory tract). Lacking both of these points, one is forced to other considerations.

Arteriosclerosis complicating diabetes is so very common that it is generally regarded as a part of the disease. Joslin<sup>1</sup> points out that the average age of onset of diabetes is fifty-one years, and that the patient therefore lives out his life in the arteriosclerotic years. Furthermore, improvement in the methods of treatment has lengthened the diabetic's life, and thus the time he spends in this period is increased. The same author presents statistics which show that, although in the pre-insulin era 64 per cent of the diabetic patients died of acidosis and 18 per cent of arteriosclerosis, there is now a reversal of this ratio to 4 per cent and 60 per cent, respectively. Arteriosclerosis, as a cause of death in diabetes, has increased threefold in importance. One naturally inquires whether this represents a relative increase resulting from reduction in the number of deaths from coma which followed the use of the specific hormone, insulin, and from simple prolongation of life in diabetics, or whether it is a true increase. Apparently the latter is true and not only is arteriosclerosis more common in diabetics, irrespective of age, weight, and sex, but it is likely to be more severe. However, not all organs share equally in this increase. The brain, for example, is little affected and, although there is more arteriosclerotic involvement of the kidneys, it is of a mild degree, rarely leading to failure. Conversely, arterial insufficiency in the legs is much more common in diabetics than in nondiabetics—eleven times more so in males and eighty times in females. Hypertension, angina pectoris, and coronary occlusion are all five times more frequent and the usual sex difference is not evident.<sup>1</sup> To sum it all up, arteriosclerosis is the arch-enemy of the

present-day diabetic, who is likely to suffer from peripheral vascular disease and to die of coronary occlusion.

One finds it extremely difficult in the case under consideration to satisfy himself that the explanation lies in simple arteriosclerosis. The age of the patient speaks of a rapidly progressive lesion, and uremia, so rarely a part of the nephrosclerosis in diabetes, was a prominent feature.

Is there, then, a single entity which might produce all the signs and symptoms demonstrated by this patient? Intercapillary glomerulosclerosis (Kimmelstiel-Wilson's disease)<sup>2</sup> is such a clinical syndrome. The original description of the condition stressed that the constant clinical features were diabetes mellitus, albuminuria, hypertension, and retinal vessel changes. Later authors<sup>3</sup> have pointed out that edema of the nephrotic type, nitrogen retention, cardiac failure, hypoproteinemia, and anemia are commonly a part of the complex. This patient presented all these except hypoproteinemia. The absence of hypoproteinemia and his relative youth are the only discrepancies noted. With few exceptions, the cases reported have been those of patients whose diabetes occurred after the age of forty. These seem minor considerations and this syndrome appears to explain best the findings in this case.

*Clinical Diagnoses:* Diabetes mellitus, severe. Chronic glomerular nephritis, with uremia. Bronchopneumonia. Pericardial adhesions.

#### SUMMARY OF NECROPSY FINDINGS

The most important lesions in this case were in three groups. First, there was generalized sclerosis of the arterioles, and the small and large arteries. The arterioles of the kidney, pancreas, gut, adrenal and brain were diffusely thickened and hyalinized, and the lumina were nearly closed. In some parts of the kidney, the lumina were completely occluded. This thickening was degenerative rather than inflammatory or necrotic. The glomeruli were ischemic, their capsules thickened and their tufts fibrotic and hyalinized. In many the hyalinization tended to be focal and located in the center of the tufts as rounded masses between the capillary loops, as described by Kimmelstiel and Wilson. In addition to the hyalinization there were scattered crescents, some of which were hyalinized. The interstitial kidney tissue was increased in amount and contained many chronic inflammatory cells. A few tubules were filled

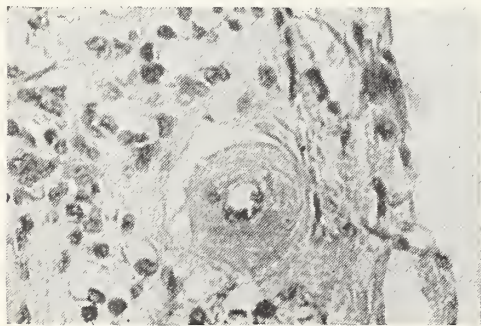


Fig. 3. Arteriole in kidney.

1. Joslin, E. P., Root, H. F., White, P., and Marble, A.: *The Treatment of Diabetes Mellitus*. Lea & Febiger, Philadelphia, 1940.

2. Kimmelstiel, P., and Wilson, C.: Intercapillary lesions in glomeruli of kidney. *Am. J. Path.*, xii:83-98 (January) 1936.

3. Newburger, R. A., and Peters, J. P.: Intercapillary glomerulosclerosis; syndrome of diabetes, hypertension and albuminuria. *Arch. Int. Med.*, lxxiv:1252-1264 (December) 1939.



with pus and many contained cellular and hyalin casts. The tubules were distended and many were lined by regenerating epithelium, whereas others were in various stages of atrophy and degeneration. The kidneys were large, pale, yellow, and swollen.

Second, there were extrarenal lesions which resulted from the renal and arteriolar disease.

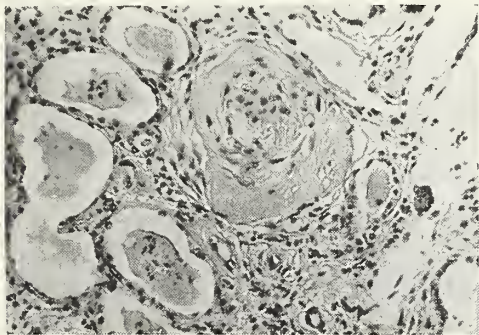


Fig. 4. Scarred glomerulus and degenerating tubules.

These included cardiac hypertrophy (heart weight 440 grams), adhesive pericarditis, both actively acute and old and quiescent, and atherosclerotic changes in the heart and aorta. All serous cavities contained fluid. The meninges and all soft tissues were edematous, and the blood was hydremic. The cortical portion of the long bones was thin and the femoral fracture showed no evidence of healing. The parathyroid glands were slightly hyperplastic.

Third, the pancreas showed few identifiable islets of Langerhans. Some islets were fibrotic and degenerated and a few showed early hyalinization. All stages, from normal to complete fibrosis, were present. The pancreas was normal in size and gross appearance.

*Other Findings:* Acute lobular pneumonia was apparently terminal. The liver showed extreme central necrosis which seemed to be due to a toxic process rather than to congestion. Thrombi were found in the periprostatic plexus but there was no evidence of the release of emboli from them.

*Necropsy Diagnoses:* Glomerulonephritis, subacute and chronic. Arteriosclerosis, generalized and renal, severe. Diabetes mellitus (clinical diagnosis). Hydrothorax, bilateral; ascites; and generalized anasarca. Acute and chronic pericarditis, adhesive. Cerebral edema. Meningeal fibrosis. Cardiac hypertrophy and dilatation. Atherosclerosis, generalized, severe. Splenic infarcts. Central necrosis of liver. Fibrosis and early hyalinization of pancreatic islets. Hyperplasia of parathyroid gland, mild. Pulmonary congestion and edema. Lobular pneumonia, acute, bilateral. Comminuted

supracondylar fracture, left femur. Osteoporosis, generalized. Thrombosis of periprostatic veins. Cysts of pineal gland.

#### DISCUSSION OF PATHOLOGIC FINDINGS

*Dr. E. D. Warner, Department of Pathology:* The changes in the kidney were of mixed type. The most extensive changes appeared to be those incident to the arteriosclerosis. However, many of the glomeruli showed focal intercapillary accumulations of hyalin material of the type which Kimmelstiel and Wilson described as characteristic of diabetes mellitus. In addition to the diffuse and focal hyalinization of the renal glomeruli, scattered "crescents" and adhesions were present. These latter are findings ordinarily considered indicative of true glomerulonephritis.

In our experience, the focal accumulations of rounded hyalin masses in the glomerular tufts are uncommon in cases of diabetes mellitus. On the other hand, varying degrees of the more diffuse glomerular fibrosis associated with arteriosclerosis is the role in diabetics who have reached the arteriosclerotic age.

#### MINUTES OF MEETINGS OF STATE SOCIETY OFFICERS AND COMMITTEES

##### Meeting of the Committee on Medical Service and Public Relations June 9, 1946

The Committee on Medical Service and Public Relations met in the central office Sunday morning, June 9, with the following persons present: Doctors Fred Sternagel (chairman), R. D. Bernard, R. C. Gutch, E. E. Shaw, D. C. Conzett, M. I. Olsen of the committee; R. L. Parker, president; H. A. Spilman, president-elect; T. A. Burcham and Mr. T. P. Sharpnack.

The fee schedule for veterans' care was discussed, and the committee voted to ask the Iowa X-ray Club to submit figures it thought were correct for such care.

Division of work among committee members was made, with Dr. Bernard assuming the responsibility for national legislative contacts; Dr. Olsen, insurance problems; Dr. Maxwell, medical economics; Dr. Gutch, veterans' problems; Dr. Shaw, rural health; Dr. Conzett, contacts with the State Board of Control; Dr. Sternagel, contact with various state groups; and Dr. Parker, labor groups.

Mr. Sharpnack was given the floor to discuss the venereal disease clinic as it is conducted at Broadlawn General Hospital and the committee consensus was that he should accept anyone for treatment since venereal disease is a public health problem and can be handled better in many ways through the clinic.

Each member of the committee discussed his problems, and it was decided to hold the next meeting early in September. The meeting adjourned shortly after noon.

# STATE DEPARTMENT OF HEALTH



## Use of Dried Blood Plasma in Iowa

PAUL R. SLATER, M.D., M.P.H., Director, Serum-Plasma Center

During February of this year, 4,176 units of dried human blood plasma were distributed by the Iowa State Health Department to 164 different hospitals in the state. This surplus dried plasma, originally prepared for use among servicemen, was made available by the American Red Cross. It was distributed on the basis of one unit for every four hospital beds, one unit for every doctor, plus an additional 10 per cent.

### PLASMA DISTRIBUTION

It was believed that this first distribution of 4,176 units would be sufficient for a three-month period. Reports received through June 13, however, indicate that only about one-fourth of these units has been used. Some reports undoubtedly have not yet been returned to the Serum-Plasma Center of the State Department of Health, and it is possible that certain doctors may not yet know that dried blood plasma is available from nearby hospitals or from the Department and its District Health Offices for free use for their patients. With the increasing number of road and other types of accidents, plasma becomes more and more important, and the patient should have full benefit of its use. When the recent hotel fire occurred in Dubuque, adequate amounts of plasma were on hand in Dubuque hospitals. Local physicians must have been relieved to know that plasma was at hand and that additional supplies could be readily obtained.

### NATURE AND USE OF PLASMA UNITS

The administration of plasma requires no special skill. Each box unit is complete in itself and contains two metal cans; one holds the bottle of dried plasma, the other the distilled water for reconstitution of the plasma. The required tubing, needles, and other equipment are contained in the two metal cans. Doctors in the service during the recent war years are already familiar with the plasma units. Blood typing procedures need not be carried out; the plasma can be administered promptly and contraindications are few.\* Shock

cases are especially benefited by plasma injections, as are also cases of hypoproteinemia.

### DATA FROM RETURNED CASE REPORTS

Eighty-one, or approximately 50 per cent, of the 164 hospitals receiving plasma have thus far returned reports to the State Health Department (through June 13). These hospitals administered plasma to a total of 622 different patients. Five hundred and ninety-nine of these patients were from Iowa; seven from Illinois; seven from Wisconsin; four from Missouri; and one each from Minnesota, South Dakota, Nebraska, Ohio and Utah. Ninety cases were recorded as having been treated in February; 164 in March; 164 in April; 183 in May; and 21 in June. The 622 patients received a total of 974 units of plasma or an average of 1.63 units each. One patient, however, received as many as fifteen units.

One hundred eleven, or 17.8 per cent, of the patients treated with plasma were accident cases of various types. Many of these had sustained burns; practically all were in shock. Eighty-eight or 14.1 per cent were obstetric cases, many of whom were in shock due to hemorrhages. The majority of the cases, 397 or 63.8 per cent were grouped in the "other" class. Most of this group were surgical cases with an occasional medical case.

Nineteen deaths, none of which was recorded as being due to the use of plasma, occurred among the 622 patients. Undoubtedly, there would have been more deaths had plasma not been used. Seventeen, or 2.7 per cent, had reactions following the injections of the plasma. All were mild reactions—fourteen of the immediate kind and three of the delayed type. The United States Army experience showed that from 1 to 2 per cent of the plasma transfusions were followed by urticarial reactions, and about 2.6 per cent by chill and fever.

\*Chief contraindications are the presence of edema of the lungs due to congestive heart failure, or severe pulmonary infections, particularly in infants.



In conclusion, it is believed that the use of dried human blood plasma has resulted in the saving of lives but that greater use can still be made of this product in Iowa. A letter has been forwarded to all hospitals to learn the number of units that will be needed for the next six months.

PREVALENCE OF POLIOMYELITIS

The Health Officers Weekly Statement, issued by the United States Public Health Service, shows a total of 1,034 cases of poliomyelitis to have been reported from the 48 states and the District of Columbia for the first 22 weeks of 1946. The total for the corresponding period in 1945 was 811.

Cases of poliomyelitis as notified to health departments during the months of January, February, and March, probably represent a carry over of infection from the summer and fall months of the previous year. In a northern state like Iowa, it is unusual for any case of this disease to be reported in March, April, May, or June. In some of the southern states, however, there is more of a tendency for the prevalence of poliomyelitis to extend from one season into the next. Abnormal occurrence is being experienced at this time in Florida, Alabama, and Texas.

The first column in the following table shows the expected number of cases in Iowa for each month, based on the average for the nine-year period, 1935-1943. Cases as notified in 1945 and thus far in 1946 are shown in columns two and three.

POLIOMYELITIS IN IOWA			
Month	Avg. 1935-1943 Expected Cases	1945 Reported Cases	1946 Reported Cases
January	2	0	8
February	2	2	1
March	1	0	0
April	1	0	2
May	1	1	8
June	0	2	4 (through the 15th)
July	4	6	
August	13	68	
September	24	92	
October	27	101	
November	8	42	
December	2	6	
Total	85	320	

It will be noted that with eight cases in May and four in June (through the 15th), undue prevalence of poliomyelitis appears to be developing very early this year.

DROWNING DEATHS IN IOWA—1945

Fatalities due to drowning in Iowa according to records of the Division of Vital Statistics, totaled eighty-four in 1945. Distribution of these deaths according to age and sex is set forth in the following table:

Age Group	Male	Female	Total Male and Female
1—4	12	2	14
5—9	6	2	8
10—19	24	2	26
20—29	9	3	12
30—49	9	3	12
50—69	8	0	8
70 +	3	0	3
Not stated	1	0	1
Totals	72	12	84

Outstanding facts as revealed by the above figures are the large number of deaths among infants and children in the age groups 1 to 4 and 10 to 19 and the occurrence of six times more deaths among males than among females.

It is tragic to realize that of fourteen deaths from drowning in the age group 1 to 4, nine such fatalities were among infants one year old; in seven instances, water tanks, and in two, tubs of water were the places where drowning resulted. Of the total of 58 drownings among persons between ten and fifty, about thirty-four or nearly 70 per cent, happened in unsupervised places, such as rivers and ponds. The occurrence of five deaths in public places emphasizes the responsibility which is shared by life guards and others who supervise public swimming pools.

USES OF AND PRECAUTIONS WITH DDT

DDT is not a cure-all, nor is it a substitute for any other phase of environmental sanitation. It is recommended, however, as an effective poison for a number of insects, particularly flies, mosquitoes, cockroaches, bedbugs, fleas and lice. It has value in improving sanitation in the home, school and on the farm.

DDT is not soluble in water. It can be used as a dust. Mixtures containing 5 to 10 per cent DDT and talc are effective on most insects. In this form it can be applied to the skin of man and most animals when reasonable precautions are followed. However, DDT powder cannot be used on cats. They will lick themselves and may swallow enough DDT to cause illness.

DDT is a poison, and as with other insecticides certain precautions are necessary to prevent any possible harmful effects.

- 1. DDT in oil solution is absorbed through the skin. Never apply these solutions to man or animal. If accidentally spilled on clothing, change promptly. Wash hands and exposed skin with warm soapy water.
- 2. Avoid inhaling the mist when spraying. Ventilate the room, and if extensive work is to be done, wear gloves, goggles and a respirator.
- 3. Cover food, dishes, and cooking utensils, or remove them from the room when spraying or dusting.
- 4. DDT looks like flour. Do not store the

# The JOURNAL of the Iowa State Medical Society

ISSUED MONTHLY

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## THE OFFICIAL ISSUE

The current number of the JOURNAL is, according to custom, the annual official issue of your state medical society. You will find reported in full the transactions of the House of Delegates at the ninety-fifth annual session. For those members who did not attend the convention, it is recommended that this section be reviewed. In addition you will find a complete roster of the membership of the state society which should prove of value to you throughout the coming twelve months in affording a convenient reference for the address of any member.

Of special interest, it is recommended that those members who are general practitioners refer to the remarks of Dr. Woods beginning at the bottom of page 315.

This issue is the final number compiled by the capable assistant to the editor, Mrs. Dorothy Dolk, who has served faithfully and efficiently for the past eight and one-half years. We welcome Miss Viola Turner who has assumed the duties of Assistant to the Editor.

## IOWA LEADS IN TUBERCULOSIS PROGRAM

The Iowa State Department of Public Health is to be congratulated again in its leadership in the campaign against tuberculosis with a new program sponsored jointly with the Iowa Tuberculosis Association. The program is to be operated on a strictly ethical basis. It is proposed to carry

out studies on a county-wide basis, but no county of the state will be entered unless approval has been sanctioned by the local county medical society. It should be pointed out that this is the only program of this type in the United States. Roentgenologic examination will be carried out at no cost to the individual.

The actual work will be performed by the latest and best equipment manufactured by the Westinghouse Electric Corporation. The equipment will consist of a portable unit which may be transported in a truck to any location in the state of Iowa. In addition there will be two mobile units consisting of a tractor-and-trailer combination. The state of Iowa is the first of twelve states to obtain this equipment, which will be delivered this month. It is the plan of those in charge of this work to use one mobile unit for the examination of school children during the school term. During the remainder of the year, this unit will be available for county-wide, all-inclusive examinations. The other mobile unit is to be devoted entirely to industrial work, and it is anticipated that there are sufficient industrial plants in the state of Iowa to occupy this unit for a year and a half.

Special features of the mobile units are worthy of mention. The bodies are completely insulated and heating and cooling units insure comfortable operation in any type of weather. The two-ton tractor is provided with electric road-sanding equipment for greater safety over icy roads, an important feature for this state. Each tractor and trailer unit carries its own power plant with a twenty-five K. V. generator, as the unit operates at two hundred milliamperes. This equipment is capable of making the economically practical small films used for mass "screenings" at a rate of more than eight hundred per eight-hour working day. In addition it can be converted to make full-size film exposures where this extra detail is desired, after three adjustments requiring less than three seconds. One great advantage of the small film "screenings" is that it will not be necessary to remove clothing for the examination. All films will be processed at the Iowa State Department of Health in Des Moines. No reports of the examinations will be furnished directly to the individual, but will be furnished to the family physician alone.

The Iowa State Department of Health and the Iowa Tuberculosis Association are to be congratulated upon the initiation of this program. The State of Iowa may indeed be proud that other states will follow with interest this particular study, which will serve as a model demonstration.



### IOWA MEDICAL SERVICE

In connection with the official issue of the year, it seems fitting to give a semi-annual report on the status of Iowa Medical Service. A year ago the plan was not in operation. The first policies were sold in September, and in the nine-month interval which has ensued since then, twelve thousand, five hundred persons have been enrolled and are eligible for service. Eight hundred and twenty-seven doctors are participating in the plan.

We did not wish to sell too much coverage in the first year of operation. Our sights were set at about twenty thousand persons. It seems probable that this objective will be attained easily and perhaps surpassed. Where we have lagged is in the enrollment of doctors. That only a third of the doctors in the state are participating is a disappointment.

We have felt that in order to offer service in any county, we must have 50 per cent of the doctors enrolled, or else we would not truly be able to give the subscriber a free choice of his physician or the full coverage outlined in the policy. Doctors who have not signed an agreement to participate are not bound by the terms of the contract, and consequently Iowa Medical Service has no jurisdiction over the service they may render.

The following counties have more than the required 50 per cent of doctors enrolled: Adams, Boone, Bremer, Butler, Cerro Gordo, Cherokee, Clarke, Clinton, Emmet, Guthrie, Hancock, Hardin, Humboldt, Jasper, Jefferson, Johnson, Kosuth, Lee, Lucas, Marion, Marshall, Monona, Montgomery, Muscatine, Page, Palo Alto, Plymouth, Polk, Pottawattamie, Scott, Story, Union, Wapello, Warren, Washington, Webster, Woodbury and Wright.

All doctors' bills submitted have been paid in full in accord with the schedule of benefits. No proration has been necessary, and we hope that none will be. We believe it is far better to pay one hundred cents on the dollar than to promise more than we are able to pay. Claims to May 31, 1946 amounted to \$6,086.50.

We feel that an analysis of the claims presented will be of interest in showing utilization of the plan and what branches of medical practice have participated. For convenience, the following list is made up alphabetically rather than numerically: Anesthesia, 25; appendectomy, 20; appendectomy plus, 1; benign tumor, 3; calculus in submaxillary gland, 1; chalazion, 1; cholecystectomy, 2; dilatation and curettage, 3; fenestration, 1; fissurectomy, 1; fractures, 2; hemorrhoidectomy, 3; herniotomy, 3; hysterectomy, 6; hysterectomy plus, 3; laparotomy plus, 3; medical care, 18; obstruction of

bowel, 1; ovarian cyst, 2; paracentesis, 5; pelvic tumor, 1; peptic ulcer, 1; pilonidal cyst, 1; prostatectomy, 1; sinus, 1; submucous resection, 1; varicocele, 1; varicose veins, 1; x-ray, 6.

In summing up, we want to stress again the basic philosophy of our plan. It is a service plan, providing medical care of specific types for the low income group without further payment from the subscriber. Commercial insurance companies cannot provide service. At best they can provide a money payment to be applied by the subscriber to the physician who renders the service. In the final analysis, the physician is the only person who can provide medical care. This is infinitely more valuable to the subscriber than a financial indemnity, for the medical profession has something to offer which can be obtained from no other source.

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### PROSTATIC CANCER TREATED BY ORCHIECTOMY

Huggins has recently reported a study of five-year results on the treatment of prostatic cancer by orchiectomy and the administration of diethylstilbesterol. It is significant that the antiandrogenic treatment of prostatic cancer has proven to have both theoretical and practical significance. Twenty patients have been reported upon in this series. In two cases there was no obvious benefit from orchiectomy but in the remaining eighteen cases definite alleviation of clinical symptoms occurred. Five patients survived more than five years after orchiectomy.

Particularly to be emphasized is the symptomatic relief obtained by the procedure and/or the administration of diethylstilbesterol. The amelioration of pain is appreciated by the patient more than following the treatment of this condition by prostatic resection or radical prostatectomy. An important consideration brought about by this study was the disappearance of certain metastases and reappearance of lesions in other areas. In other word, orchiectomy apparently injured cancer cells in certain areas so severely that they did not again become active. The antiandrogenic treatment of cancer of the prostate has demonstrated that a chemical change in the internal environment of the host has brought about a sustained regression of a malignant neoplastic process. The clinical improvement including relief of pain, improved appetite with gain in weight, decrease of anemia, and a decrease of size and sometimes disappearance of the primary tumor and metastases have definitely established this type of treatment as a boon to the individual afflicted with prostatic cancer.

### ATOMIC BOMB STUDIES

Captain R. H. Draeger (MC) USN has been placed in charge of the biological aspects of the atomic bomb tests soon to be carried out "Operations Crossroads" at Bikini atoll under the auspices of the Naval Medical Research Institute. Assisting him will be eleven United States Navy officers, seven United States Army officers, and civilian research specialists. Arrangements have been made to obtain the maximum amount of information that may be utilized in the future for the protection of personnel and military supplies and equipment.

The program will stress the study of biological effects of the various types of blast injuries, which may be designated by the terms, *air blast*, *water blast*, *solid blast*, *thermal blast* and *radioactivity blast*. These, plus secondary reactions, include all the effects that the atomic bomb may have on personnel.

Numerous laboratory animals including two hundred pigs, two hundred goats, three thousand white rats, and one hundred cockroaches, will be placed at selected locations aboard the twenty-two target vessels during both tests which are to be studied.

Some goats will be tethered in exposed positions on decks of the target ships and others let free to roam in compartments. Some will be covered with multi-type clothing and placed in exposed spots to determine the thermal effects on the clothing. Others will be clipped and various types of anti-flash cream applied to test the protective action of each. Blood studies will be made on the animals before and after the tests. These studies will give some of the best evidences of the occurrence of injury from radioactivity and recovery from its effects. Illness from radioactivity ("radiation sickness") will be studied particularly and treated in various stages with the view toward determining the best methods of therapy. Studies will be made of the effects of the various types of blast on food, water, living pathogenic bacteria, viruses, vaccines, toxins, antisera, bacteriophages, hormones, vitamins and other medical supplies and equipment. The National Cancer Institute will collaborate in a study of any carcinogenic effects of the bomb explosion upon sensitive animals and will furnish one hundred and twenty white mice with predilections to cancer in an effort to obtain further information on this problem. The Department of Agriculture will study the effects of the bomb explosions upon various kinds of grain and will also investigate the genetic effects induced in exposed insects.

These combined studies should accomplish much in the way of understanding of the effects of

atomic bomb explosions. Shields Warren and his co-workers have already presented a comprehensive report of these effects following the bombing of Hiroshima and Nagasaki. These studies necessarily were made after a considerable interval following the bombing and included eight hundred hospital cases and thirteen thousand additional casualties. With these controlled experiments the additional information obtained should prove of great value.

### MISSISSIPPI VALLEY MEDICAL SOCIETY MEETING

The eleventh annual meeting of the Mississippi Valley Medical Society will be held at the Hotel Jefferson, St. Louis, September 25, 26, and 27. Over thirty clinical teachers from the leading medical schools will conduct this great postgraduate assembly whose entire program is planned to appeal to general practitioners. There will be over sixty technical and scientific exhibits, round-table luncheons at noon, and a big banquet preceded by a social hour. Dr. Arthur H. Compton, Nobel Prize Laureate and Chancellor of Washington University, will be the principal banquet speaker, together with the presidents of the Illinois, Iowa, and Missouri State Medical Societies. All ethical physicians are cordially invited to attend. A detailed program may be obtained from the Secretary, Harold Swanberg, M.D., 209-224 W.C.U. Building, Quincy, Illinois.

### CLINICAL CONGRESS OF AMERICAN COLLEGE OF SURGEONS

The American College of Surgeons announces that arrangements have been completed for the holding of its Thirty-second Clinical Congress at the Waldorf-Astoria, New York, September 9 to 13 inclusive. Plans include the usual extensive program of demonstrations, scientific sessions, medical motion pictures, panel discussions, symposia, forums, business meetings, and educational and technical exhibits, which will be held in the headquarters hotel, and operative and non-operative clinics in the local hospitals.

This will be the first Clinical Congress since the meeting in Boston in 1941. Since that time, 2,744 surgeons have been received into fellowship in absentia, and to them in particular the convocation on the opening night of the Congress will be a long anticipated event. Many of these new Fellows will have recently returned from service with the armed forces.

### DDT PRECAUTIONS

(Continued from page 297)

powder in the kitchen. Keep it out of the reach of children.

5. If DDT is swallowed accidentally, drink some mustard water immediately and call a physician.

6. DDT oil solutions are inflammable. Keep away from fire.



# Transactions of the House of Delegates

## Iowa State Medical Society, Ninety-Fifth Annual Session

### April 17-19, 1946

Wednesday Evening, April 17, 1946

The first meeting of the House of Delegates, held in connection with the Ninety-Fifth Annual Session of the Iowa State Medical Society at the Hotel Fort Des Moines, Des Moines, April 17-19, 1946, convened at eight-fifteen o'clock with Dr. Robert L. Parker, President-Elect, acting as Speaker.

The Speaker: The House will please come to order. First order of business is the roll call. May I hear a motion that the registration cards be accepted as the official roll call?

Dr. Boice: I move that the registration cards be accepted as the roll call.

*The motion was seconded, put to a vote and carried.*

#### DELEGATES

Allamakee—J. W. Thornton  
Black Hawk—E. E. Magee  
Boone—A. B. Deering  
Buchanan—R. L. Knipfer  
Cerro Gordo—L. R. Woodward  
Clarke—C. R. Harken  
Clinton—R. F. Luse  
Des Moines—F. G. Ober  
Dickinson—T. L. Ward  
Dubuque—D. C. Conzett  
Emmett—M. T. Morton  
Fayette—J. P. Gallagher  
Floyd—J. B. Miner, Jr.  
Greene—G. W. Franklin  
Hamilton—F. F. Hall  
Hardin—J. S. Johnson  
Henry—J. S. Jackson  
Howard—F. E. Giles  
Iowa—C. F. Watts  
Jackson—J. F. Swift  
Jefferson—L. D. James  
Johnson—J. W. Dulin  
Johnson—A. W. Bennett  
Keokuk—D. L. Grothaus  
Kossuth—R. M. Wallace  
Lee—L. C. Pumphrey  
Lucas—H. D. Jarvis  
Marion—E. C. McClure  
Marshall—A. D. Woods  
Mitchell—R. L. Whitley  
Muscatine—C. P. Phillips  
Palo Alto—F. X. Cretzmeyer  
Pocahontas—W. F. Brinkman  
Polk—J. C. Parsons  
Polk—L. F. Hill  
Polk—W. R. Hornaday  
Polk—C. W. Losh  
Pottawattamie—G. V. Caughlan  
Poweshiek—S. D. Porter  
Sac—J. R. Dewey  
Scott—W. C. Goenne  
Scott—George Braunlich  
Story—J. E. McFarland  
Tama—G. T. McDowall  
Union—C. C. Rambo  
Van Buren—L. A. Coffin  
Wapello—C. A. Henry  
Warren—E. E. Shaw  
Washington—W. L. Alcorn  
Wayne—A. E. Davis  
Webster—E. M. Kersten  
Woodbury—A. Q. Johnson  
Woodbury—C. T. Maxwell  
Worth—S. S. Westly

#### ALTERNATES

Bremer—P. J. Amle  
Buena Vista—H. E. Farnsworth  
Butler—J. G. Evans  
Cass—R. L. Barnett  
Cherokee—C. F. Obermann  
Davis—C. H. Cronk  
Jasper—J. W. Billingsley  
Linn—Philip Crew  
Madison—C. E. Hickenlooper  
Monroe—C. C. Fowler  
Polk—C. B. Luginbuhl  
Taylor—G. W. Rime

#### STATE SOCIETY OFFICERS

President—R. D. Bernard  
President-Elect—R. L. Parker  
Secretary—J. C. Parsons (Delegate)

Treasurer—J. A. Downing  
Trustee—J. I. Marker  
Trustee—W. A. Sternberg  
Trustee—L. R. Woodward (Delegate)  
Councillor—C. H. Cretzmeyer  
Councillor—J. B. Knipe  
Councillor—R. N. Larimer  
Councillor—E. F. Beeh  
Councillor—J. C. Hill  
Councillor—H. A. Housholder  
Councillor—C. A. Boice  
Councillor—R. C. Gutche  
Councillor—J. G. Macrae

The Speaker: The next order of business is the approval of the minutes of the Thursday Morning Session, 1945, as published in the JOURNAL. Do I hear a motion for their approval as printed in the JOURNAL?

Dr. C. A. Boice: I move the minutes be approved as printed in the July JOURNAL, 1945.

*The motion was seconded, put to a vote and carried.*

The Speaker: The next in order is reports of officers. The first is the President's address, Dr. Bernard.

President Bernard read his address. (This was published in the May, 1946, issue of the JOURNAL OF THE IOWA STATE MEDICAL SOCIETY.)

The Speaker: Thank you, Dr. Bernard. Next on the agenda is the President-Elect's address. I wish to mention just two things that the President-Elect has tried to carry out during the year. The first was in connection with the state vocational rehabilitation program, which is under the Department of Education. The director asked that a fee bill be established for services rendered to patients coming under the program. After conference with their representatives from Chicago and elsewhere, it was agreed that they would accept the fee bill as established by the Iowa Medical Service, which greatly simplified things.

Another activity was with the State Board of Social Welfare. I was privileged to accept an invitation from our State Social Welfare Board to visit three states and make a study of the medical service rendered to the recipients of old age assistance. Those states were Nebraska, North Dakota and Minnesota. We came back convinced that the prepayment plan for medical service rendered those recipients was not the proper thing but that a postpayment plan should be established. Under the prepayment plan most of you have had to fill out the blanks and estimate the monthly medical expense of the recipient for the next twelve months. In the postpayment plan that we favor the doctor will treat the recipient as he does any other of his private patients, and will render a bill at the end of the month, or whenever he is accustomed to sending bills to his patients. That recipient will present the bill to the Social Welfare Board. The hospitals and the dentists will do the same thing.

A resolution making such a recommendation to the Social Welfare Board will be presented sometime during the meeting of this House for your consideration.

Mr. President, that constitutes my brief address. Thank you.

May I have a motion that the reports as printed in the Handbook be approved?

The Secretary: I so move.

The Speaker: The question has been raised whether we approve the reports in the Handbook as a whole. You know there is an amendment to the Constitution and By-Laws to be considered. The Committee on Constitution and By-Laws made no recommendation. However, that amendment will be considered under the head of new business. The motion was made that the reports as printed in the Handbook be approved. Do I hear a second?

*The motion was seconded.*

Dr. Boice: I move to amend that, Mr. Speaker, by excepting the one referring to a change in By-Laws.

The Speaker: Do I hear a second to the amendment that we approve all the reports as published in the Handbook with the exception of the report of the Committee on Constitution and By-Laws?

*The amendment was seconded, put to a vote and carried.*

The Speaker: Now we will vote on the motion as amended. All those in favor say "aye"; opposed "no". *The motion as amended is carried.* All reports in the Handbook, with the exception of the report of the Committee on Constitution and By-Laws have been approved.

Reports of Officers

REPORT OF THE SECRETARY

House of Delegates, Iowa State Medical Society:  
Herewith is the report of your secretary for the year 1945:

MEMBERSHIP

The membership record of the counties will be found in tabulated form on the following pages, but briefly it is as follows:

Active Members (Life Members included).....	2,401
Delinquent Members .....	12
Eligible Non-Members .....	88
Ineligible Non-Members .....	58
Physicians Not in Practice or Retired.....	129

Under the classification of active members were carried the 162 life members and the 693 members in military service, all of whose dues were waived. The total number of members showed a decrease of 42 over 1944, and a decrease of 80 from the high point of 2,481 reached, several years ago.

One Hundred Per Cent Counties

The number of counties having one hundred per cent membership reached fifty-six, an enviable record and one which we hope may be maintained during the years of peace ahead. The membership for the state as a whole rose to ninety-six per cent for all eligible physicians, also a very high mark.

Counties on the honor roll are as follows:

Adair	Lucas
Adams	Lyon
Audubon	Madison
Benton	Mahaska
Boone	Marion
Bremer	Marshall
Buchanan	Mills
Buena Vista	Monona
Butler	Montgomery
Cerro Gordo	Muscatine
Chickasaw	Osceola
Clarke	Palo Alto
Davis	Pocahontas
Des Moines	Poweshiek
Dickinson	Sac
Emmet	Scott
Floyd	Shelby
Greene	Sioux
Hamilton	Tama
Hardin	Taylor
Henry	Union
Howard	Van Buren
Humboldt	Washington
Ida	Wayne
Jackson	Webster
Jones	Winneshieik
Kossuth	Worth
Louisa	Wright

Number of One Hundred Per Cent Counties  
by Districts

First .....	5	Seventh .....	3
Second .....	6	Eighth .....	7
Third .....	7	Ninth .....	5
Fourth .....	4	Tenth .....	6
Fifth .....	4	Eleventh .....	4
Sixth .....	5		

Committee Activities

The Committee on Medical Service and Public Relations was very active in 1945. Each member of the committee was assigned certain responsibilities, and he took charge of the matters which fell within his province and then reported back to the committee as a whole. National legislation, Veterans Administration program, cooperation with farm and labor groups, and with the committee investigating mental hospitals, all have had the attention of the committee.

The office has spent a great deal of time helping physicians in service find locations for civilian practice. Information about possible openings has been tabulated and made available on request. Personal interviews have also been held with all physicians who have come to the office, and an effort made to help with each man's particular problem.

1945 MEMBERSHIP RECORD

COUNTY	1945 Membership	Delinquent Members	Eligible Non-Members	Ineligible Non-Members	Not in Practice or Retired	Percentage of Eligible Physicians Who Are Members
Adair.....	8	.....	.....	.....	.....	100
Adams.....	7	.....	.....	.....	.....	100
Allamakee.....	10	.....	2	.....	1	83
Appanoose.....	15	1	1	.....	1	88
Audubon.....	8	.....	.....	.....	.....	100
Benton.....	17	.....	.....	.....	.....	100
Black Hawk.....	70	.....	1	6	2	99
Boone.....	18	.....	.....	2	.....	100
Bremer.....	15	.....	.....	.....	1	100
Buchanan.....	19	.....	.....	1	.....	100
Buena Vista.....	18	.....	.....	.....	.....	100
Butler.....	12	.....	.....	.....	.....	100
Calhoun.....	18	1	.....	.....	1	95
Carroll.....	23	.....	1	.....	.....	96
Cass.....	16	.....	1	.....	.....	95
Cedar.....	10	.....	2	.....	.....	83
Cerro Gordo.....	55	.....	.....	2	2	100
Cherokee.....	14	2	4	.....	2	70
Chickasaw.....	13	.....	.....	.....	.....	100
Clarke.....	7	.....	1	.....	.....	100
Clay.....	12	.....	1	1	.....	92
Clayton.....	18	.....	3	.....	3	86
Clinton.....	43	.....	1	1	2	98
Crawford.....	11	.....	2	1	.....	85
Dallas-Guthrie.....	37	.....	3	1	1	93
Davis.....	8	.....	.....	.....	1	100
Decatur.....	8	.....	3	.....	.....	73
Delaware.....	7	.....	5	.....	1	58
Des Moines.....	36	.....	.....	1	1	100
Dickinson.....	11	.....	.....	.....	.....	100
Dubuque.....	67	1	3	1	3	94
Emmet.....	13	.....	.....	.....	.....	100
Fayette.....	22	.....	7	.....	2	73
Floyd.....	17	.....	.....	1	1	100
Franklin.....	12	.....	1	.....	.....	92
Fremont.....	11	.....	1	.....	.....	92
Greene.....	22	.....	.....	1	1	100
Grundy.....	11	1	.....	.....	.....	92
Hamilton.....	17	.....	.....	.....	2	100
Hancock.....	.....	.....	.....	.....	.....	.....
Winnebago.....	21	.....	1	.....	4	95
Hardin.....	22	.....	.....	1	4	100
Harrison.....	15	.....	1	1	1	94
Henry.....	18	.....	.....	1	1	100
Howard.....	9	.....	.....	.....	.....	100
Humboldt.....	9	.....	.....	.....	.....	100
Ida.....	12	.....	.....	.....	2	100
Iowa.....	12	.....	2	.....	2	86
Jackson.....	18	.....	.....	.....	3	100
Jasper.....	20	.....	2	.....	1	91
Jefferson.....	16	.....	1	.....	1	94
Johnson.....	156	4	9	.....	2	92
Jones.....	11	.....	.....	.....	.....	100
Keokuk.....	13	.....	2	.....	.....	87
Kossuth.....	14	.....	.....	2	1	100
Lee.....	39	.....	.....	3	2	93
Linn.....	106	2	5	1	4	94
Louisa.....	8	.....	.....	1	2	100



COUNTY	1945 Membership	Delinquent Members	Eligible Non-Members	Ineligible Non-Members	Not in Practice or Retired	Percentage of Eligible Physicians Who Are Members
Lucas.....	12	....	....	....	1	100
Lyon.....	8	....	....	....	....	100
Madison.....	10	....	....	....	....	100
Mahaska.....	29	....	....	1	1	100
Marion.....	19	....	....	1	17	100
Marshall.....	43	....	....	....	2	100
Mills.....	9	....	....	....	1	100
Mitchell.....	13	....	4	....	....	77
Monona.....	15	....	....	....	1	100
Monroe.....	12	....	1	....	1	92
Montgomery.....	18	....	....	....	1	100
Muscatine.....	19	....	....	2	1	100
O'Brien.....	16	....	1	....	1	94
Osceola.....	10	....	....	....	....	100
Page.....	24	....	1	1	1	96
Palo Alto.....	13	....	....	....	....	100
Plymouth.....	13	....	3	....	....	81
Pocahontas.....	14	....	....	1	1	100
Polk.....	255	....	2	9	6	99
Pottawattamie.....	63	....	4	2	2	94
Poweshiek.....	19	....	....	....	....	100
Ringgold.....	5	....	1	....	....	83
Sac.....	19	....	....	....	....	100
Scott.....	87	....	....	3	9	100
Shelby.....	7	....	....	....	1	100
Sioux.....	18	....	....	....	....	100
Story.....	31	....	1	....	....	97
Tama.....	21	....	....	....	4	100
Taylor.....	6	....	....	....	1	100
Union.....	14	....	....	....	1	100
Van Buren.....	7	....	....	....	2	100
Wapello.....	43	....	1	1	2	98
Warren.....	9	....	2	....	....	82
Washington.....	22	....	....	1	....	100
Wayne.....	8	....	....	....	1	100
Webster.....	42	....	....	1	3	100
Winneshiek.....	16	....	....	1	1	100
Woodbury.....	113	....	2	5	6	98
Worth.....	5	....	....	....	....	100
Wright.....	19	....	....	....	3	100
Total.....	2,401	12	88	58	129	96%

A great deal of work has been done in helping organize Iowa Medical Service. The office has tried to enroll the physicians in the counties where policies are to be sold, and to answer all inquiries about the plan.

Financial Report

The by-laws make the secretary responsible for collecting dues and other Society income. This has been done and the funds so accumulated have been turned over to the treasurer whose report will follow.

John C. Parsons, Secretary

REPORT OF THE TREASURER

The report of the treasurer for the year 1945 shows that once again the State Society has had to dip into its reserves to meet its operating costs. As usual, the Society operated upon a budget system which set forth the estimated income and sources of expenditure. Figures for the year are as follows:

INCOME

Annual Session .....	\$ 2,066.02	
Dues .....	15,566.50	
Interest on bonds.....	1,118.19	
Interest on savings.....	39.84	
Journal—		
Advertising .....	\$15,198.96	
Reprints .....	1,208.79	16,407.75

Premium on sale of bond.....	93.75
Discount on purchase of bond.....	8.91
Speakers Bureau Fees.....	10.00
Miscellaneous .....	143.18

TOTAL INCOME.....\$35,454.14

EXPENDITURES

Administrative Miscellaneous .....	\$ 1,281.94
Annual Session—	
Refunds to Exhibitors.....	\$ 2,066.02
Expense .....	533.46
	2,599.48
Council .....	513.05
County Society Services.....	38.93
General Salaries .....	6,228.10
Journal—	
Salaries .....	\$ 3,878.40
Printing and Engraving..	11,639.59
Reprints .....	1,101.18
	16,619.17
Legislative Committee .....	4,500.00
Medicolegal Committee .....	250.00
Medical Service and Public Relations.....	713.27
Other Committees .....	497.97
Rent and Office Supplies.....	1,946.07
Speakers Bureau Travel Expense.....	255.73
Stationery and Printing.....	393.32
Trustees .....	270.86
Iowa Medical Service.....	5,000.00

TOTAL EXPENDITURES.....\$41,107.89

EXCESS EXPENDITURES

OVER INCOME .....

to sell \$5,000.00 of bonds. This was done December 17, and the sale netted a premium of \$93.75, which is shown as income above.

The item, discount on purchase of bond (\$8.91) has been carried for a number of years, but was added in 1945 so that the bond account at the end of the year would show the face value of the bonds.

The operating statement for the year, showing funds at the beginning and end, is as follows:

Balance on hand at first of year:

Cash in banks.....	\$ 4,697.35
Bonds .....	49,491.09
	\$54,188.44
Minus net operating loss for year 1945....	5,653.75

FUNDS ON HAND AT END OF YEAR..\$48,534.69

This balance of funds on hand at the end of the year is represented by the following:

Cash in Bankers Trust

Company Bank—

Secretary's Account .....	\$ 179.53
Treasurer's Account .....	3,340.06
Savings Account .....	515.10
	\$ 4,034.69
Treasury Bonds .....	39,500.00
U. S. Savings Bonds (Maturity Value	
\$4,000) Cost .....	3,000.00
U. S. Savings Bonds, Series G.....	2,000.00

TOTAL CASH AND BONDS.....\$48,534.69

James A. Downing, Treasurer

### REPORT OF THE BOARD OF TRUSTEES

The Board of Trustees held five meetings during the year, at all but one of which all members were present. Other business was transacted by mail and telephone to conserve the time and energy of the members.

It was necessary in June to fill the vacancy on the Board caused by the death of Dr. Oliver J. Fay. Dr. Lee R. Woodward, a former member of the Board, as well as former Councilor and President of the Society, was appointed to this place.

The year 1945 showed the biggest financial drain upon the Society of any of the war years. It may be interesting to the members to review figures for 1940 as compared to 1945. The main source of revenue, of course, is dues. In 1940 the Society took in \$22,856 from dues, in 1945 \$15,566, or a loss of \$7,290.

In 1940 the Journal printing and engraving cost \$7,569, in 1945 it cost \$11,700, or an increase of \$4,200. Advertising, however, increased from \$6,600 in 1940 to \$15,332 in 1945, which more than compensated for the increased cost of publication.

Dues were waived for 65 physicians in 1941; for 200 in 1942; for 597 in 1943; for 661 in 1944; and for 693 in 1945.

In 1944 the Board of Trustees appropriated \$6.00 per member for the organization expense of Iowa Medical Service, the State Society's insurance plan. However, it has been necessary to advance only \$5,000 of this appropriation to date.

Public relations has held the forefront of attention during the year. With so much legislation being proposed, it is essential that the medical profession keep the public informed of the good and the bad in such legislation, and that it also keep it informed of what is available through the medical profession itself. A plan was approved to use national radio advertising for a period of thirteen weeks. The cost of this would have been \$1.00 per member, and the trustees felt it was a worthwhile experiment. However, the national program has been delayed for various reasons, and the money has not been spent.

The Board of Trustees authorized the experiment after the problem had been discussed and approved by the Executive Council. The Executive Council expressed itself as favoring an active public relations program, and voted approval of an increase of \$5.00 a year in state dues to take care of the expense involved. Consequently, in making plans for 1947, the Board of Trustees recommends that the dues of the State Society be raised from \$10 to \$15 a year, the increase of \$5.00 to be used for public relations work. The Board recommends that the House of Delegates approve the increase and authorize the Secretary to collect \$15 State dues in 1947.

It was necessary to sell \$5,000 of the State Society bonds in December to take care of the deficit in income. However, the financial condition of the Society is sound, and the treasurer's report shows the net worth, as well as a breakdown of the income and expenditures for the year.

John I. Marker, Chairman  
W. A. Sternberg  
L. R. Woodward

### REPORT OF THE FIRST COUNCILOR DISTRICT

With the return of doctors from service, many counties in our district have begun to show signs of renewed activity. There are some counties, however, that have very few doctors, and these men are too busy to take any time off for county meetings or organized medicine. By combining three or four counties, we have held some very good meetings, at which there has been much discussion of the care of non-service-connected disabilities of returned veterans.

One need that I feel is pressing, especially in the more or less rural counties, is a state-wide immunization program similar to that held just before the war. Great good can be accomplished by this program. Another pressing need is for serious work by each county society in encouraging doctors to enroll in the State Society's prepayment insurance plan, Iowa Medical Service.

Many doctors are looking forward to a regular old time state medical meeting.

L. L. Carr, Councilor

### REPORT OF THE SECOND COUNCILOR DISTRICT

The reports from the deputy councilors of the various counties comprising the Second District all indicate that county society activity is near a standstill. Only business meetings have been held for the most part, but nearly all of the counties have conducted immunization programs and tuberculosis case finding surveys. Some of the counties have enrolled in the State Society's prepayment medical care plan, Iowa Medical Service.

A small number of the medical men in the armed forces has returned, and with the release of the balance of these men from the Army and Navy, we should be able to resume normal activities. With their return will come an improvement and advance in the distribution of medical care to the people of the district.

C. H. Cretzmeyer, Councilor

### REPORT OF THE THIRD COUNCILOR DISTRICT

The affairs and condition of organized medicine in the Third Councilor District are good, moving along in the usual high plane of former years. Many of the doctors are returning from service, relieving the war shortage and taking some of the burden from the shoulders of those who remained at home to carry on and keep the banner of regular medicine floating high. I wish at this time to commend the men of this district who worked long hours with no vacation and with no thought of their own health or convenience, in order that no one should suffer for want of adequate medical attention.

Most of the counties in this district have had one or more meetings during the past year, and last summer a very successful scientific meeting of the Upper Des Moines Medical Society was held at Spirit Lake. Many doctors in the district attended.

Three deputy councilors in the district died during 1945—Dr. John G. deBey of Sioux county, Dr. J. M.



Sokol of Clay county, and Dr. J. H. Hovenden of Pocahontas county. All had been tireless workers in the ranks of organized medicine and will be greatly missed.

I take this opportunity to extend my thanks to the deputy councilors and members of the various county societies in my district for the kindness and cooperation they have shown me in the year that has passed.

J. B. Knipe, Councilor

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#### REPORT OF THE FOURTH COUNCILOR DISTRICT

County medical meetings in this district have suffered due to the war. As of February 10, more than one third of the sixty doctors who were in the armed services had not yet returned, so that the burden of medical care still falls on the older group.

In general, however, a surprising number of meetings has been held and business meetings at least have been continued by every group. It would seem that if talent were available so that scientific programs might be developed, more enthusiastic meetings would naturally follow. In some counties medical society meetings have been combined with hospital staff meetings to the advantage of both groups.

One is struck with the increase in the average age of doctors in the rural counties. More than half of the doctors in every county but one are more than fifty-five years of age. Some plan to reverse this trend should be developed.

Due to the relative scarcity of doctors a good deal of slackening in public health projects has been noted, although in three counties immunizing and tuberculosis survey programs have been carried out.

Opinion as to the Iowa Medical Service plan is mixed; some look upon it as an attempt to remedy or at least to slow down the development of political medicine; while others are very sure it is political medicine itself. In general, understanding of the plan has increased support for it. In four of the nine counties in the district from 50 to 100 per cent of the doctors are enrolled as participating physicians.

R. N. Larimer, Councilor

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#### REPORT OF THE FIFTH COUNCILOR DISTRICT

There have been no district meetings in the Fifth District during the past year, but county meetings were held, with local physicians furnishing the programs. Most of the counties continued their immunization and vaccination programs.

Many of our physicians are out of service and are resuming their private practice. A number of new physicians have located in this district, especially in the larger cities and towns. Many of the smaller places are still without medical service, however.

With the return of our service men, we hope to have bigger and better medical meetings and to resume our district meetings.

E. F. Beeh, Councilor

#### REPORT OF THE SIXTH COUNCILOR DISTRICT

The progress of medicine in the Sixth District during the past year has been through the channels of individual county meetings rather than through district gatherings. All of the counties have met to elect officers and delegates to the annual meeting of the State Society. In various county society meetings, the programs have been provided by Army or Navy physicians home on furlough or discharged from service. These meetings have been intensely interesting and instructive. Other programs have been furnished by members of the faculty of the College of Medicine, the State Department of Health, or by members of the faculties of medical schools or foundations outside of Iowa. Some county societies have held meetings devoted entirely to a discussion of Iowa Medical Service, the State Society's prepayment plan for medical care.

We hope that the postgraduate method of instruction may soon be resumed in our district.

Many doctors, after serving in the armed forces, have returned to practice in our district. We gladly welcome them and extend them our gratitude, our good will and God-speed.

James C. Hill, Councilor

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#### REPORT OF THE SEVENTH COUNCILOR DISTRICT

The end of 1945 brought the end of another war year. We all hope it is the last war year we will experience, because the past years have not only been very difficult for the stay-at-home doctor, but have greatly curtailed the activities of the medical societies, both state and county.

Despite the fact that doctors have been very busy with the usual duties of their profession, immunization programs and preventive medical programs have been carried out in several parts of the district. The medical service plan has met with a good reception generally throughout the district and many of the doctors have enrolled. Many doctors have returned from military service and are again serving the public in their former locations. There is a definite upswing in the sentiment for the construction of new hospitals, or the building of large additions to present structures, all of which augurs well for the future of medical care for the people of the district.

H. A. Housholder, Councilor

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#### REPORT OF THE EIGHTH COUNCILOR DISTRICT

During the war years, the smaller county societies have labored under great difficulties, with sometimes not enough men to hold meetings. In particular, Louisa and Van Buren counties are down to four physicians, although Louisa county held ten meetings during the year in spite of the few practitioners. Washington, Jefferson and Muscatine counties have continued holding regular meetings.

Lee county had but one meeting during the year. However, seven physicians have now returned to Keokuk, and the society officers for 1946 are all returned veterans. Seventeen doctors have returned to Scott county. That county and Des Moines county have held regular meetings. Four men have returned to Burlington, one man to Henry county. Both Des Moines and Scott counties have done a very commendable thing—they have caused to be published in the newspapers the office addresses and telephone numbers of the returning members.

Very few of the returning doctors desire to locate in small towns, preferring to locate where hospital facilities are closely available. This is not altogether a healthy condition. Practically all country towns in this district are within thirty minutes of a good hospital.

All things considered, medical organization in the Eighth District is in a healthy condition, and without doubt people of this district will have adequate attention even if they do have to go a few miles to get it.

C. A. Boice, Councilor

#### REPORT OF THE NINTH COUNCILOR DISTRICT

A district meeting of the Ninth Councilor District was held at Ottumwa in June, with a very good attendance. Dr. Bernard, president of the State Society, explained the details of the profession's prepayment plan, Iowa Medical Service.

Wapello county is to be commended on its meetings held every two weeks with scientific programs. Membership is excellent throughout the district, and other affairs of the county societies were handled as they would have been in normal times.

R. C. Gutch, Councilor

#### REPORT OF THE TENTH COUNCILOR DISTRICT

The following is a resumé of the activities of the Tenth Councilor District for 1945: Responses received from letters of inquiry addressed to the societies are characterized by their similarity; namely,

there was no society activity in the past year. While the service rendered by the few remaining physicians has at times been classified as inadequate, on the whole there have been few reported instances of neglect. The greater hardship has been on the physicians themselves. With the welcome return of physicians from service, we hope we may now enjoy the advantages found in organized medicine.

James G. Macrae, Councilor

#### REPORT OF THE ELEVENTH COUNCILOR DISTRICT

Activities in the Eleventh Councilor District have been curtailed by the scarcity of physicians. The few who have been at home have been very busy caring for the sick and consequently have not been able to do anything else.

The prepaid medical care plan, Iowa Medical Service, is receiving the approval of the majority of the doctors now that they understand it covers more than surgery.

Meetings have been few and far between in some counties. Page and Montgomery counties have been holding joint meetings. With the return of many of the physicians who have been in service, it is hoped that many activities of the societies may be resumed.

W. S. Reiley, Councilor

#### REPORT OF DELEGATES TO THE AMERICAN MEDICAL ASSOCIATION

The 1945 annual meeting of the American Medical Association had to be postponed until the first of December because of the ban on conventions issued by the Office of Defense Transportation. With the lifting of the ban, a three day meeting was held in Chicago, and the report of that meeting may be found in the January, 1946, issue of the Journal of the Iowa State Medical Society, pages 17, 18 and 24.

Thomas F. Thornton  
James E. Reeder  
Thomas A. Burcham

## Reports of Standing Committees

#### REPORT OF THE COMMITTEE ON CONSTITUTION AND BY-LAWS

The Committee on Constitution and By-Laws has no suggested changes to recommend for consideration by the House of Delegates. It does, however, call attention to the fact that a proposed change in the Constitution was offered in the final session of the 1945 meeting. Changes in the Constitution must be proposed one year, be published in the Journal, and be voted on the following year. Consequently that change is now eligible for consideration by the House. It is as follows:

"Article V, Section 1, of the Constitution shall be amended to read as follows: The House of Delegates shall be the legislative and business body of the Society, and shall consist of delegates elected by the component county societies. They shall have the

sole voting power at meetings, except that the President shall cast the deciding vote in the event of a tie vote."

John H. Henkin, Chairman  
Paul O. Nelson  
Thomas L. Ward

#### REPORT OF THE FINANCE COMMITTEE

Due to the pressure of professional duties, the Finance Committee did not meet to audit the books of the Iowa State Medical Society for 1945. This was done by Widdup and Company, Certified Public Accountants, and the Committee accepted the company's report that the books were in order.

#### REPORT OF THE COMMITTEE ON LEGISLATION

Your Legislative Committee has not much to report for the past year. Owing to the fact that there



will be no session of the legislature in 1946, your committee has been more concerned with the future than with the present. Several meetings have been held with various other groups which have asked aid of your committee in the preparation of legislation to come before the General Assembly in 1947.

Your committee has also throughout the year carried out a close liaison with the Board of Trustees of the Iowa State Medical Society and with the Committee on Public Relations; all these groups working together in close harmony.

John W. Billingsley, Chairman  
L. A. Coffin  
A. L. Jenks

#### REPORT OF THE COMMITTEE ON MEDICAL EDUCATION AND HOSPITALS

The World War and its aftermath have involved difficult problems in the field of medical education. It is appropriate to point out some of the ways in which these responsibilities have been or are being met in Iowa.

In the training of medical students, despite the difficulties arising from heavy drafts upon its faculty by the armed forces, the College of Medicine participated in the nationwide program for accelerating the medical course. Under this plan, begun in May, 1942, medical instruction was given on the year-round basis. This resulted in the graduating of six classes by March, 1946, instead of four classes by June, 1946, as would have occurred under the peacetime schedule. This program has aided materially in providing medical personnel needed by the armed forces, especially in the later phases of the war, and during the demobilization and reorganization period which follow.

Besides the courses ordinarily included in the medical curriculum, the College of Medicine made a special effort to prepare its students for types of service emphasized by the war. Included in this category is the field of tropical and parasitic diseases.

Many physicians returning from the armed forces have expressed their desire for facilities to renew their acquaintance with clinical medicine, or to complete professional preparations interrupted by the war. The College of Medicine has made special efforts to provide such facilities. From September, 1945, to February 1, 1946, a total of 146 veteran physicians have been enrolled in these courses. Briefly, these courses include:

(a) *Informal courses* in which the physician is entirely free as to the courses he wishes to attend and the duration of his stay. Sixty-five veterans have elected this plan.

(b) *Formal courses* of three general types.

1. *Research students* registered in the Graduate College and working toward a degree. Fifteen veterans enrolled.

2. *Residencies and fellowships* for those working to fulfill requirements for certification in specialty boards or for other purposes. Fifty-one veterans are enrolled.

3. *Formal refresher courses* covering a definitely prescribed course over a period of three months. Enrollment limited to 15 for each such course. Fifteen veterans enrolled.

In addition, the College of Medicine, in collaboration with the State Department of Health and the State Hygienic Laboratory, offered two special courses during the current fiscal year on the laboratory diagnosis of parasitic diseases. The courses were open to physicians and to laboratory technicians, the registration being restricted to 30 in each course. The combined total registration was 58, consisting of 5 physicians and 53 technicians. They represented 44 laboratories in Iowa and 2 in Wisconsin.

Another commendable development is the announced series of two-week refresher courses for service physicians scheduled to begin at Broadlawns Hospital, Des Moines, February 11, 1946. Each series is designed to accommodate 14 service physicians. These courses are sponsored by the Polk County Medical Society.

Comment by your Committee relative to hospitals in Iowa is being withheld pending the preparation of the final report by the Iowa State Hospital Survey Committee. This committee, appointed by Governor Blue, includes among its members the Chairman of the Committee on Medical Education and Hospitals.

M. E. Barnes, Chairman  
A. A. Johnson  
I. N. Crow

#### REPORT OF THE COMMITTEE ON MEDICAL SERVICE AND PUBLIC RELATIONS

Last year the Committee on Medical Service and Public Relations was made a standing committee of the House of Delegates. It consists of at least seven members to serve in the state in a similar capacity as, and in cooperation with, the Council on Medical Service and Public Relations of the American Medical Association. This committee has the responsibility of national legislation and incorporates the old committee on medical economics and the subcommittee on medical service plans.

During the year Dr. Bernard has been the contact man for national legislation and liaison officer for state legislative matters; Dr. Olsen for insurance; Dr. Maxwell for medical economics; Dr. Woodward for institutions under the board of control; Dr. Gutch for veterans affairs; Dr. Hennessy for state educational institutions; Dr. Parker for labor and management; and Dr. Sternagel for State Department of Health, farmers, and other health groups.

The committee has met in Des Moines on four occasions; Dr. Bernard has traveled extensively over the United States on national legislative matters and Dr. Olsen has met with many medical and other groups in and out of the state to discuss voluntary prepayment medical care. The members have contributed much of their valuable time in coming to Des Moines, carrying on correspondence, traveling

in and out of the state to keep informed on developments relative to public relations, and taking part in the discussions.

The sudden ending of the War in midyear necessitated the abandonment of many plans already underway. The present social revolution has brought an avalanche of proposed reforms that threaten to change the entire practice of medicine. Fortunately, nothing has yet crystallized.

Today's public relations problem is too large for any one committee to handle and we wish to impress our county units with their responsibility for becoming informed about current social medical problems and medical economics. We must emphasize the importance of county societies and individual members contacting local groups and especially their legislators to inform them of our problems and desires.

### National Legislation

At no time in the history of medicine has there been more activity in the field of interstate and national relations. The attack on medicine is now spearheaded by the Wagner-Murray-Dingell bill and the Pepper bill. This attack has been strengthened by the support of labor, by the addition of new groups which will receive benefits under the provisions of the bills, and by soft-pedaling the enormous cost of the health programs. By including many of the former demands of medicine in the Wagner bill, some doctors favor it because they visualize a fixed income, a forty hour week, and a reduction of responsibility to the patient.

Your president was one of seventeen state presidents who met in Detroit last April to organize the Conference of Presidents, which has now grown to include forty states. The aim of this organization is to provoke discussion of national problems on a "grass root" level and offer suggestions based upon these discussions to the Council on Medical Service and Public Relations, the Trustees, and the House of Delegates of the American Medical Association. At its second meeting in December, the group was enlarged to include other state officers. At a meeting held February ninth of this year, a resolution calling for introduction into Congress of health legislation which could be approved by the American Medical Association, and a plan for national unification of medical service plans were presented to both the Council on Medical Service and Public Relations and the Trustees.

The Council on Medical Service and Public Relations has become a most vital factor in the affairs of the American Medical Association. It is hard to believe that this Council in the short time since its organization could revolutionize the American Medical Association's methods of ascertaining the opinions of the rank and file of its members, and that it could present these opinions to the House in such a manner that they would be approved. The Council's many regional meetings and the two meetings in Chicago last autumn laid the groundwork for the recently organized Division of Prepayment Medical

Care Plans which will coordinate the existing medical service plans and assist states in organizing such plans. Details of this organization are still to be worked out, but we have, at long last, a national medical service plan actually sponsored by the American Medical Association.

By the time this report is read the methods used by the American Medical Association to combat adverse legislation in Congress will be known to all. It is not impossible that the Wagner bill will defeat itself by the sheer magnitude of funds required to put it into operation. The Pepper bill will be far more difficult to defeat. The bill to establish a Department of Health, with its head having cabinet rank, will not become a law. At the moment this does not seem to be the final solution of the tangled situation in Washington. There is also little likelihood of any health measure approved by the American Medical Association being introduced into Congress.

The reorganization of the Veterans Administration by General Bradley and the excellent program for medical care of the veterans being developed by General Hawley have received the enthusiastic support of this committee. We sincerely hope that when General Hawley proposes a plan for Iowa it will prove satisfactory both to the service men and the medical profession.

The North Central Medical Conference held a most successful meeting in St. Paul last November. Public relations was the keynote of its program. I am pleased to report that the same program was used as the basis for the program of the National Conference on Medical Service in Chicago February 10. In addition to taking an active part in the various organizations mentioned this committee has given support to the National Physicians Committee in its efforts to formulate plans for defeat of adverse legislation.

Every member of our Congressional delegation has been contacted in his office and I can assure you that these men are now, as in the past, in sympathy with our views on national legislation, and are giving us close cooperation even to the point of sending us pertinent items of legislative importance. It is of interest to know that these men all favor some form of health legislation satisfactory to the American Medical Association which will give them something to fight for, not against.

You will note that during the past year new and powerful groups have sought expression of opinions held by the rank and file of the profession. These opinions have activated the formation of a national service plan, but little has been accomplished toward the solution of the bureaucratic muddle which now exists in Washington. The defeat of the Wagner and Pepper bills will not solve the problem.

While unification of the numerous health agencies under federal control will go far toward the solution of the health problems of this country, it is doubtful if this can be accomplished until the American Medical Association has vastly increased the facilities of its Washington office and has created a well



financed national public relations program—a program which will be especially effective within the Congress and among all influential groups in the country, both on a national and a state level.

#### Voluntary Prepayment Medical Care

The Board of Directors elected by your Executive Council effected an organization of Iowa Medical Service by naming officers and committees.

Enrollment of members was begun about six months ago, but knowing that newly acquired groups are prone to greater than normal utilization of any such plan, we have proceeded slowly and with caution. Our membership as of this date is made up of twenty-five groups with about 2,400 certificates outstanding and with approximately five thousand persons covered.

Sixteen claims totaling more than one thousand dollars have been paid. An additional thirty claims are pending. The exact liability of the pending claims is difficult to approximate without more complete data on individual cases. It would appear, however, that our claim ratio in relation to premium income has not been excessive.

There are 635 of our doctors now enrolled as participating physicians. This is less than one third of the membership of the Iowa State Medical Society.

It is not deemed advisable to solicit and enroll groups in any locality where less than fifty per cent of the physicians have joined up with the plan. Many of the more promising employed groups in the state are in localities where we have few or no participating physicians and our enrollment of subscribers has suffered accordingly. We have learned also that individuals often refuse to enroll when they find that their own physician does not actively support the plan.

This failure of the doctors in many counties of the state to give wholehearted and enthusiastic support to our prepayment plan is the one greatest obstacle we have to overcome.

#### Medical Care of Veterans

Dr. Gutch and this committee have tried to keep in touch with the Veterans Administration Facilities so that we might keep informed of what is being done. We have also expressed our desire to be told of new proposals for the medical care of veterans in this state. There is a feeling on the part of this committee that the Veterans Administration has not as yet kept the society adequately informed of proposed changes of regulations nor of the appointment of physicians throughout the state to assist them. Some counties have already been requested to submit names of physicians qualified to act as consultants to the Veterans Hospital. The fee schedule for outpatient care and consultants will undoubtedly be revised or, as we understand it, is in the process of revision at the present time.

Our latest information on proposed plans for outpatient care can be summarized in the following quotation from the address of Major General Paul R. Hawley before the Council on Medical Service and Public Relations in Chicago on October 20, 1945.

"At the moment all women veterans are entitled to outpatient care at whatever expense for any disability, service-connected or non-service-connected. Men veterans are entitled to outpatient care only for service-connected disability. . . . We should like to have every physician in each community designated as a veterans' physician and we should like insofar as possible, for the veteran to choose his physician in his own community like any other person in the community does. . . . Each county has its own problems—its own medical problems—and we are not interested in demanding but one plan. We will subscribe to three thousand different plans. We will make the shoe fit the foot of the county society."

#### Health Education and Propaganda

Since the purchase of time on the radio carries with it restrictions on not-for-profit organizations, at present our radio programs must remain educational and not controversial, although numerous opportunities exist whereby the point of view of medicine may be expressed on well-established programs dealing with controversial subjects.

After much consideration, this committee recommended to the Executive Council that it approve a thirteen-week trial radio program under the Michigan and Conference of Presidents' plan, in which seven minutes are devoted to medicine in the home. These programs will probably be broadcast to Iowans over stations KRNT, WMT, and WOW. Details of this plan are still being worked out.

The National Physicians Committee has from time to time submitted material on socialized medicine suitable for advertisements in newspapers. This committee referred the matter to the Executive Council without its approval and suggested that such advertising be carried out and paid for by individual county societies in their local papers.

#### Old Age Assistance

Dr. Maxwell has been in close touch with Dr. Channing Smith, Medical Consultant for the State Department of Social Welfare, and has met with him several times. Dr. Smith has also appeared at our committee meetings and expressed the desire of the State Board of Social Welfare to cooperate with the medical profession with regard to medical care for old age cases. The great difficulty is that the federal law requires that medical allowances be paid to the old age recipient. A considerable percentage of the sums paid is diverted to other things than medical care. So far we have been unable to correct this, but plans are now being formulated for eventual solution of the problem.

#### Public Health

Since the early days of Iowa the responsibility of health service has rested with township boards and the city and town councils. Except in the larger cities that have their own health departments, health service is administered by town councils and township boards that have very little knowledge of how best to handle their local health problems. This independent action in health matters by many small

groups within a county is very unsatisfactory since disease does not recognize township or city lines. Many health groups throughout the state are proposing a change in our laws permitting a city-county health unit to take over these health functions. They need the support of the medical profession.

During recent years many nursing homes have sprung up throughout Iowa without any health supervision. Last fall this committee wrote letters to the State Board of Social Welfare and to the State Department of Health requesting them to initiate legislation for correction of the nursing home situation in Iowa.

The Iowa State Tuberculosis Society believes that there are too many cases of open tuberculosis at large which present a definite health menace to the rest of our population and it feels that many more of these patients would accept sanitarium care if the present law requiring payment for services in our state and county tuberculosis hospitals was repealed. Objection to this proposal has been raised on the grounds that free hospital care for the treatment of tuberculosis would not solve the problem unless accompanied by new legislation permitting local health officers to enforce the quarantine on individuals with this disease in a communicable stage. This question will undoubtedly come up for further consideration in the near future.

#### Board of Control Institutions

Early in 1945 Governor Blue appointed a committee of five to investigate the mental hospitals in Iowa and bring back recommendations for improvement. Chairman of the committee was Senator Knudsen of Mason City; other members were Senator Doud of Douds, Representatives John R. Gardner of Lisbon and J. S. Heffner of Webster City, and Dr. S. M. Hamilton of the U. S. Public Health Service.

Dr. Woodward, who was made responsible for board of control institutions in the Committee's division of work, kept in close touch with Senator Knudsen. When the Governor's committee completed its inspection of the four mental hospitals, the institutions at Glenwood and Woodward, and similar institutions in other states, it met with the Committee on Medical Service and Public Relations informally and presented its viewpoint and recommendations. Dr. Hamilton's recommendation was never made to the committee, but direct to the Governor and it did not coincide with the viewpoint of the Iowa members of the committee.

The Committee on Medical Service and Public Relations has never received an official copy of the report and recommendations. It has been consulted informally, but it is hoped that before any definite decision is reached by the Board of Control, the Committee or the State Society will be given an opportunity to review the reports and make recommendations. The situation is one in which the entire medical profession is very much interested, both as citizens and as physicians, and your Committee will not neglect this phase of its activity.

#### Farms, Labor, Management

Last summer the farm groups met with the Council on Medical Service and Public Relations of the American Medical Association and drew up proposals for better cooperation between the farmers and medical men throughout the country. We have similar contacts to make with labor and management. This committee feels that these groups can help us and that we can help them if between us there can be built up a feeling of mutual understanding and helpfulness. Iowa farm, labor, and management groups have already been contacted and have expressed their willingness to have representatives meet with us for the purpose of working out our problem here in Iowa. A meeting is scheduled in March for this purpose.

Fred Sternagel, Chairman  
R. D. Bernard  
Martin I. Olsen  
R. C. Gutch  
M. C. Hennessy  
L. R. Woodward  
C. T. Maxwell

#### REPORT OF THE COMMITTEE ON NECROLOGY

The Iowa State Medical Society lost 55 members by death in 1945. Three members died in military service: Dr. Glenn E. Harrison of Mason City who died of a coronary occlusion while on terminal leave prior to re-entering private practice; Dr. Eugene W. Springer of Iowa City who died in Egypt; and Dr. Richard Paul Morden of Des Moines who died of a cerebral hemorrhage in England.

Will the House of Delegates please stand for a moment in memoriam while the secretary reads the names of our comrades who are no longer with us.

Name	Town	Age
Chester A. Ayres.....	Lorimor .....	64
Frederick L. Barnes.....	Oskaloosa .....	70
John F. Bening.....	Clarinda .....	69
Barton B. Bridge.....	Albert City .....	74
James C. Brown.....	Littleport .....	72
John F. Brubaker.....	Hubbard .....	86
Alfred H. Bullock.....	Cushing .....	71
Roscoe P. Carney.....	Davenport .....	60
Lowell H. Chamberlain.....	Des Moines .....	68
Milton Daily.....	Sioux City .....	75
James J. Daly.....	Decorah .....	75
William L. Downing.....	Moulton .....	83
Thomas L. Eland.....	Letts .....	69
Oliver J. Fay.....	Des Moines .....	70
Fred W. Fletcher.....	Hinton .....	65
Eric J. Gambee.....	Earling .....	55
William S. Greenleaf.....	Atlantic .....	73
John T. Hanna.....	Burlington .....	55
Edward A. Hanske.....	Bellevue .....	73
Glenn E. Harrison.....	Mason City .....	42
Friedrich A. Hecker.....	Ottumwa .....	66
Peter A. Helgesen.....	Lake Mills .....	76
Francis R. Holbrook.....	Des Moines .....	64
John H. Hovenden.....	Laurens .....	71
William Jepson.....	Sioux City .....	82
John L. Keane.....	Dubuque .....	49
Patrick E. Keffe.....	Sioux City .....	59
George Kessell.....	Cresco .....	88
William E. Marsh.....	Eldora .....	79
Hobart E. Martin.....	Clinton .....	67
John McDannell.....	Nashua .....	75
Charles W. McQuillen.....	Charles City .....	58
Clifford D. Mercer.....	West Union .....	61



John H. Merrick.....Glenwood .....72  
George R. Meyer.....Marshalltown .....74  
Richard P. Morden.....Des Moines .....39  
Robert S. Moth.....Council Bluffs .....64  
Roe B. Reed.....Clearfield .....44  
Lester D. Rusk.....Sioux City .....72  
Herbert B. Saylor.....Des Moines .....68  
Nicholas Schilling.....New Hampton .....77  
Bernhard G. Schmidt.....Davenport .....70  
Carl J. Snitkay.....Belle Plaine .....70  
John M. Sokol.....Spencer .....69  
Eugene W. Springer.....Iowa City .....34  
Richard H. Stafford.....Sumner .....85  
John F. Stageman.....Council Bluffs .....69  
George H. Steinle.....Burlington .....51  
Ernest J. Thierman.....Cedar Falls .....70  
Clarence I. Thomas.....Guthrie Center .....63  
Ira F. Thompson.....Donnellson .....71  
John A. Thomson.....Sioux City .....65  
Claude M. Walker.....Kellerton .....71  
Dell W. Ward.....Oelwein .....63  
Nathan A. York.....Lisbon .....79

James G. Macrae, Secretary of the Council

REPORT OF PUBLICATION COMMITTEE

During 1945 the publication of the Journal of the Iowa State Medical Society continued on the same curtailed basis as during the previous war years. The paper limitations and some of the wartime problems eased somewhat with the close of the war; however a better grade of paper could not be procured until depletion of the reserve stock.

The size of the Journal was increased slightly with the January issue in order to conform with the majority of other state medical journals and thus facilitate the advertisers' tasks of supplying electrotypes for their advertisements. A new style cover was presented at the same time and comments indicate the transformation was one of progression.

The April issue was devoted to the College of Medicine of the State University of Iowa for the third consecutive year and was equally as prominent as its predecessors.

The Roster of Iowa Physicians in Military Service was maintained throughout the year, and it was

indeed gratifying to note that toward the close of the year its contents were beginning to diminish rapidly.

The close of the year also brought to a conclusion Dr. Hill's service as Editor of the Journal. The pressure of added duties necessitated his resignation after nine years of excellent service in that position.

	1943	1944	1945
Reading Pages.....	586	532	508
Advertising Pages.....	330	396	460
Percentage of Reading Pages.....	63.9%	57.3%	52.4%
Original Articles.....	76	50	48
Editorials.....	55	53	54
Total Journal Expenditure.....	\$12,889.49	\$14,117.08	\$16,619.17
Total Journal Income.....	\$ 9,838.37	\$12,307.60	\$16,541.11
Net Expenditure for Journal.....	\$ 3,051.12	\$ 1,809.48	\$ 78.06
Number of State Society Members.....	2,471	2,443	2,401
Net Expenditure per Member.....	\$ 1.23	\$ 0.74	\$ 0.0325

The statistics in the accompanying table portray the comparative cost of the Journal during the past three years. During this time there has been a steady increase in total Journal expenditure; however the Journal income has increased at an even higher rate with the result that in 1945 the net expenditure for the Journal was \$78.06, or only three and a quarter cents per member. The extensive use of color advertisements accounts for a portion of the advance in both income and expense. The limited number of papers in each issue has been a factor in keeping expense lower, but this will rise during the coming year since the reading pages, especially the scientific section, must be increased. Journal income increased sharply in 1945, due mainly to the fact that several new advertising contracts were procured by the Cooperative Medical Advertising Bureau. This Bureau merits special commendation for its splendid efforts on behalf of the various state medical journals, and the Committee wishes to stress the importance of Iowa doctors patronizing those firms which advertise in their state Journal. The future of your Journal depends on your support—read your advertising pages and know your advertiser.

Everett M. George, Editor

Reports of Special Committees

REPORT OF THE CANCER COMMITTEE

The main work of the Cancer Committee in 1945 was the preparation of a manual on cancer for distribution to lay persons. Dr. A. W. Erskine, Dr. H. W. Morgan, Dr. E. D. Plass and Dr. E. G. Zimmerer were responsible for this work, and by the end of 1945 had it completed ready for printing. Much credit is due them for the clarity and excellence of the manual. Arrangements have been made for obtaining funds to print and distribute the manual, and this should take place early in 1946.

Mrs. C. V. McCarthy of Mason City was placed in charge of the Field Army work in Iowa early in 1945 by the executive board of the Field Army, with the approval of the Cancer Committee. The Cancer

Committee studied the proposed changes in the structure of the American Cancer Society and approved of the new program. Their recommendation of approval by the State Society was submitted to the Executive Council and a supplemental report on this will be made at the state meeting in April.

REPORT OF THE FIELD ARMY

The American Society for the Control of Cancer with which this society has been associated for many years has been reorganized. It has now become the American Cancer Society and is under an entirely new leadership. Mr. MacEwen has become the Executive Director and the Board of Directors has been entirely revamped. Mr. Bobst, head of Hoffman-

LaRoche, has become active in the cancer society as has also Mr. Adams, head of Standard Brands, Inc. The business activities of the organization are in competent hands and a markedly expanded program is under way.

The Field Army is still maintained as it has been in the past and is at present the only active organized group of workers representing the American Cancer Society. This organization is being made much more representative than it has been formerly and it is planned to have county representatives to the state organization in each state, and representatives from the state to the national organization. There will be one lay and one professional representative from each state. These men will constitute the Board of Directors of the American Cancer Society.

A research program has been set up under the direction of Dr. Rhoades of the Memorial Hospital. This deals with the broad field of growth in both its pathologic and normal aspects with the hope of determining factors relating to cancer. Already fellowships have been established for continuation study in the field of the cancer, both clinical and on the research level, for recent graduates of medicine. Senior fellowships which carry a stipend of six to seven thousand dollars a year have been established for advanced workers in the field of cancer devoting all of their time to cancer studies. The program of research has been mapped out and planned by the National Research Council, the group which attacked and conquered the atomic bomb project, and it is a very comprehensive program.

Funds raised by the Field Army in its campaign are to be divided on a sixty-forty basis, sixty per cent being retained within the state, twenty-five per cent to the research program, ten per cent to education and service, and five per cent for national administration expense.

Within the state, our plans are to expand the educational and service program of the Field Army as rapidly as funds become available. We hope to make use of educational facilities, movies, pamphlets, posters, and speakers for educational work in cancer. We hope also to have funds available to provide short term scholarships for doctors of the state who wish to take further training in special phases of cancer work or to provide for attendance at continuation courses or special courses for cancer.

One part of the program in which we are particularly interested is the establishment of detection centers. These should be clearly distinguished from cancer clinics in that actual final diagnosis and treatment is not undertaken in a detection center. With the approval of the county medical society and the cooperation of members of the society, we propose to have detection centers set up and equipped by the Field Army. Any person can apply for an examination at this center and the personnel in charge of the center need not be specialized men in various branches of medicine. In practice appointments are made by individuals desiring examination. A careful history is taken on a blank provided which

deals primarily with the detection of symptoms which might be due to cancer. The physical examination is also aimed at detecting lesions that seem suspicious for cancer. Such findings, if positive, are mailed to the patient's physician or if no physician is named, are given to the doctors in the community in rotation. If necessary such patients may be referred to cancer clinics for further diagnostic methods and treatment. In the detection center, no biopsies are taken and no treatment is given. The patient is told simply that he has a condition which warrants further examination and is referred to his private physician to have this work undertaken. A letter stating the findings of the detection center is sent to the physician named by the patient.

Such centers have been established in a few cities and have worked very successfully. The percentage of positive findings runs as high as eighty per cent in some of the centers. These centers offer additional advantages in that they afford an opportunity to study many cases of cancer in a short period of time; they make the physicians of the community cancer conscious; and they can provide a source for considerable education of the lay public on cancer information. Remember that these detection centers are run by and for physicians, with the physical aids provided by the Field Army, and with voluntary personnel to help in maintaining the detection center.

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H. W. Morgan, Chairman  
E. D. Plass  
E. G. Zimmerer  
James C. Hill

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#### REPORT OF THE HISTORICAL COMMITTEE

Distinct progress has been made during the past year in completing the medical history of additional counties in Iowa.

During the present year, 1946, special recognition will be given to the Centennial year in Iowa history, and appropriate articles will be published connected with medical history in this state of one hundred years ago.

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Walter L. Bierring, Chairman  
Henry G. Langworthy  
Clyde A. Henry  
Charles L. Jones  
Lester C. Kern

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#### REPORT OF THE COMMITTEE ON INDUSTRIAL HEALTH

During the past year no meetings were called for the Industrial Hygiene Committee but herewith are a few reports:

A mobile small-film x-ray unit was purchased for use in the tuberculosis case-finding program conducted jointly by the Industrial Hygiene Division and the Tuberculosis Division of the Iowa State Department of Health, in cooperation with the county medical societies. The proposed tuberculosis case-finding program will be carried out in the different county society units.

We also feel the following cases should be reported:



Two suspected cases of benzol poisoning were investigated by members of the Iowa Division of Industrial Hygiene, after an elderly couple had been overcome by vapors emanating from their basement. It was found that the basement had been painted with aluminum paint containing benzol. When the furnace was started before the paint was dry, dangerous amounts of benzol vapors were given off.

The Iowa Division of Industrial Hygiene, in cooperation with the State Department of Labor, assisted in an investigation of a Des Moines plant where eight out of nine employees were killed by an explosion of unknown origin. The company was engaged in the manufacture of plastic wood, plastic porcelain, and fabric cement utilizing acetone, benzene, and other solvents. Inadequate knowledge of the physical properties of the components in the mix, as well as improper safety controls throughout the plant, were considered contributing factors.

James E. Reeder, Chairman

## REPORT OF THE COMMITTEE ON MATERNAL AND CHILD HEALTH

For reasons which need no explanation your committee has not functioned or had any meetings since the last regular meeting of the State Society. However, we have attempted to keep in mind the purposes and aims of this committee and its program, subject to the will of the society.

We are hopeful that the EMIC program will be terminated six months after the duration as promised and that nothing comparable to it will be substituted or started. A recent bulletin from the Children's Bureau belies this promise in that it talks of the lessons learned and the experience gained in this program that will be of great value in the future work. It is our opinion that the Pepper bill would extend to all children, regardless of station in life or financial status, full medical service up to twenty-one years of age. It would seem quite plain that the powers that be and the Children's Bureau have no intention of relinquishment, but rather a wide extension of its activities. The strategy seems to be to break the Wagner-Murray-Dingell bill up into units. This is suggested in the Magnusson bill, the Pepper bill and the Hill-Burton bill, whose provisions are all contained in the Wagner-Murray-Dingell bill.

With the private practice of medicine becoming a little more normal we are desirous that the immunization programs be renewed. It is still the desire of this committee that the work be done by and be kept in the hands of the private or family physician, and that the programs be worked out with the approval of and in cooperation with the State Department of Health, as in the past.

This committee has for some time frowned upon health contests as carried out by various organizations in the state. We are hopeful that some program may be worked out whereby physical examinations may be given these individuals on the basis

of their own physical condition and that they may not be judged in competition with others as are animals in the prize ring.

We are sympathetic to the ideas of the preschool examination, but here again we urge it be kept in the hands of the family physician who knows the child and is in a better position to judge his condition. Mass examinations are never thorough or complete.

H. E. Farnsworth, Chairman  
E. D. Plass  
R. H. McBride  
Lee F. Hill  
H. A. Weis  
C. P. Phillips  
J. F. Gerken

## REPORT OF THE POSTWAR PLANNING COMMITTEE

This committee was born under the stress and emotions of war, without instructions as to duties. The chairman attempted to have the executive council define or point the way towards the activities desired. No one has done this, and your committee through correspondence has felt it should conserve the funds for our Society and not meet until such a meeting could have a constructive objective.

Thus this committee has been willing but inactive, a condition of status quo.

G. F. Harkness, Chairman  
M. E. Barnes  
E. M. MacEwen  
H. E. Stroy  
B. F. Wolverton

## REPORT OF THE SPEAKERS BUREAU COMMITTEE

During 1945 the Speakers Bureau has not been as active as in the past. Due to the fact that doctors have been extremely busy and overworked, there has not been the demand for meetings and speakers. We hesitated to stimulate too much activity or to request speakers to prepare talks and take long drives since there were so many drains on their energies. Whenever we received requests for programs, we invited speakers from nearby communities.

An outstanding feature of the Bureau's activities in 1945 was the series of lectures by Dr. Pelouze presented in cooperation with the State Department of Health. The host cities to these meetings were Ottumwa, Red Oak, Burlington, Dubuque, Des Moines, Sioux City, and Mason City.

Our weekly health programs over radio stations WOI at Ames and WSUI at Iowa City were conducted as usual. The educational manuscripts which were prepared by various members of the State Society were of genuine interest to our listeners as evidenced by the 1,495 requests received for copies of specific talks.

Several medical societies and lay organizations availed themselves of the Bureau's services in arranging meetings and procuring films for their organizations.

Throughout the past few years many demands have been made of our physicians and the Commit-

tee is sincerely appreciative of the added time and energy doctors have spent in behalf of the Bureau.

George E. Mountain, Chairman  
Albert A. Schultz  
Robert N. Larimer  
James Dunn  
Ora F. Parish

## REPORT OF THE TUBERCULOSIS COMMITTEE

No regular formal meeting of the tuberculosis committee was held during the past year. This was largely because the physicians, who were members, were much overworked attending their own extensive practice. The chairman, however, had repeated contacts with the Legislative Committee of the State Medical Society, and as President of the Iowa Tuberculosis Association, maintained constant liaison with that association.

J. Carl Painter, Chairman

The Speaker: I will ask each one separately if he has any additional report. Has the Secretary any further report?

The Secretary: No further report.

The Speaker: The Treasurer? The Treasurer is not here. Has the Board of Trustees, Dr. Marker, Chairman, any further report? (Absent) Dr. Sternberg, member of the Board of Trustees, any further report? (Absent) We will pass that. Chairman of the Council, Dr. Cretzmeyer.

Dr. Cretzmeyer: No additional report.

The Speaker: Delegates to the American Medical Association.

Dr. Thornton: No further report.

The Speaker: The standing committees, Constitution and By-Laws, any further report?

Dr. Ward: No further report.

The Speaker: The Finance Committee, Dr. McClure.

Dr. McClure: No further report.

The Speaker: Legislation.

Dr. Billingsley: No further report.

The Speaker: Medical Education and Hospitals.

Dr. Barnes: Nothing further.

The Speaker: Medicolegal Committee, Dr. Ely.

Dr. Ely: Mr. Speaker, nothing appeared in the Handbook. The reason for that is there is very little to report. We have been called upon to assist one of our members in the last year, and that case was settled.

The medicolegal defense work has been so ably handled under commercial insurance that my committee is one of the very few that has saved the Society a lot of money. It is best to let sleeping dogs lie. When you don't make too much commotion in a community about malpractice, you don't have epidemics of malpractice. Not to plug for anybody, I will say that the management of medicolegal affairs and the defense of physicians in Iowa has been exceptional. As you know, one company probably insures about 75 per cent of our membership. Our members have been indemnified as well as defended, and there are probably as few damage suits against physicians as, perhaps, in any state in the Union.

The Speaker: Thanks, Dr. Ely. Medical Service and Public Relations, Dr. Sternagel.

Dr. Sternagel: We have two further reports for the Committee on Public Relations.

## RURAL RELATIONS COMMITTEE

This committee has not been completely organized as yet. A meeting was held in March with the Health Committee of the Farm Bureau and matters of common interest were discussed.

The members of the Committee to date attended the first annual Rural Health Conference in Chicago. This meeting was taken up primarily with discussions of the problems to be met. They are many, especial emphasis being placed on the distribution of physicians, need for hospital and diagnostic facilities, prepayment plans, and special problems of the farm population in low income areas.

The medical personnel in the meeting spent the afternoon reporting on the activities in the various states. The consensus was that the matters at hand should be discussed on a national basis but actually solved on a state and county basis. The committee plans to proceed with studies and recommendations in this state.

In the conference with Farm Bureau members, both state and national, it is found that they are very co-operative and generally have the same opinions on the methods of handling these problems that the medical profession has. It is recommended that each county society contact the Farm Bureau and similar organizations in their counties, and start studies on the local situation.

## VETERANS AFFAIRS COMMITTEE

The Veterans Administration has ruled that veterans with service-connected disabilities are entitled to care for those disabilities in their home communities and can select a physician of their choice in that community for that care. We are informed that the Veterans Administration is willing to contract for this care with the state medical societies on a mutually agreeable fee basis and will allow an additional percentage for administrative purposes. The states of New Jersey, California, Kansas, and Michigan have already made such contracts and other states are now negotiating such an agreement. These considerations by the Bureau to the medical profession are in accord with the policies advocated by this committee during the past year.

Anticipating that the House of Delegates might be interested in such a contract with the Veterans Administration for the State of Iowa, our committee on veterans' affairs, consisting of Drs. R. C. Gutch of Chariton, E. M. Honke of Sioux City, and J. S. McQuiston of Cedar Rapids, has been assembling information on this subject and is prepared to offer suggestions or ways and means by which this society can participate in one of these programs. We are hopeful that General Hawley can be here to give us further information on this matter. This committee is grateful to those members of the society outside this committee who have given us so much help and particularly wish to thank the members from Woodbury County for their assistance in assembling data.

We hope that the House of Delegates of the Iowa State Medical Society will give this matter prompt and careful consideration.

The Speaker: I will ask the Executive Secretary at this time to announce the registration.

Executive Secretary McCord: The registration consists of 54 delegates, 12 alternates and 14 State Society officers, making a total of 80.

The Speaker: The next order of business is the report of the Committee on Necrology, Dr. Macrae. You will find a list of deaths on page 34 of your Handbook.

Dr. Cretzmeyer: Will the members please rise?

(The members stood in silent tribute as the names of the deceased members were read.)

The Speaker: The next order of business is the report of the Publication Committee, Dr. George. Any further report?

Special Committees: Baldridge-Beye Memorial, Dr. Hennessy.

Dr. Hennessy: Mr. Speaker, we had one thesis submitted by a student at the University, Kirk C. McGuire. The other members of the committee, Dr. Warner of the Department of Pathology and Dr. Fowler of Internal Medicine, and I have reviewed this, and we think it is worthy of the stipend. The subject of the thesis is "The Rh Factor and Physiologic Jaundice of the Newborn." I will submit the manuscript when it comes to my hand. The Publication Committee believes it is worthy.

The Speaker: Cancer Committee, Dr. J. C. Hill.

Dr. J. C. Hill: Nothing new to report.

The Speaker: Fracture Committee, Arch O'Donoghue. Historical Committee, Dr. Bierring. Industrial Health, Dr. Reeder.

Dr. Reeder: No further report.

The Speaker: Maternal and Child Health, Dr. Farnsworth.

Dr. Farnsworth: Nothing further to report.

The Speaker: Postwar Planning, Gordon Harkness.

Dr. Harkness: No further report.

The Speaker: Procurement and Assignment. I will ask the Executive Secretary to read Dr. Suchomel's report.

## REPORT OF STATE CHAIRMAN PROCUREMENT AND ASSIGNMENT SERVICE

To Officers and Delegates of Iowa State Medical Society in Annual Session April 17-19, 1946, Des Moines, Iowa:

I am asking the Executive Secretary of the Iowa State Medical Society to present this final report of Procurement and Assignment Service for Iowa. I regret exceedingly that circumstances prevent my attending the meeting and submitting it in person.

Procurement and Assignment, originally instituted as the Medical Preparedness Committee, came into existence in August, 1940. Just prior to the entry of our country into the war, it became the Procurement and Assignment Service under the War Manpower Commission. The first duties consisted of endeavoring to get all physicians in the state to complete the questionnaire sent out from the American Medical Association. I believe that about 99.8 per cent of all the physicians in Iowa at that time promptly complied with our requests.



The next function was to determine what reserve officers were to be deferred in call to active duty. However, after December 7, 1941, all reserve officers were called up for duty under War Department orders.

Realizing that the Army and Navy would need medical officers, the War Department in cooperation with the Procurement and Assignment Service, classified all physicians in the state as to availability for military service. Final decision as to essentiality of a physician was vested in the State Chairman. I am pleased to report that we received practically unanimous support on the part of the profession. True, there were isolated cases of "slackerism" in the state manifested by such procedures as injecting hydrocele fluid into the bladder and overloading the body with glucose. These cases were few and far between.

In practically all instances we relied on the judgment of district and county liaison members before classifying a doctor as available for service. To the district members of our committee I wish to express my thanks and appreciation for their wholehearted cooperation. I regret that the same cannot be said of county secretaries; too many of them flatly refused to cooperate in our requests for information.

The 9-9-9 program, an Intern and Resident assignment, proved the hardest work. Most of the hospitals cooperated fully. However, one or two were always asking for more than the Central Office at Washington allotted to them and more than we could provide.

On March 31, 1946, the office of the Iowa Procurement and Assignment Chairman was officially closed and work transferred to the state office at Des Moines.

I assure you that even though my official position was a thankless one, in the course of which I was more often than not exposed to the ire and criticism of many of our medical brethren, on the whole I enjoyed the five and one-half years of rather close relation to the Iowa profession. I admit that errors in judgment may have been made. However, I feel that they were errors of commission instead of omission. I also wish to express my thanks to the officers of the Iowa State Medical Society for the past five and one-half years. Lastly, but by far not the least, I appreciate the assistance given liberally by the office force of the State Society.

Thos. F. Suchomel, M.D.

President Bernard: Mr. Speaker, I would like to move, if it is in order, that we extend our sincere thanks and appreciation to Dr. Suchomel for the job he did—as he said, a thankless job.

*The motion was seconded, put to a vote and carried.*

The Speaker: The Committee on Scientific Exhibits, Dr. Birge. Any report? Tuberculosis Committee, Dr. Painter.

Dr. Painter: No further report.

The Speaker: Memorials and communications. Mr. Secretary, any communications? New business?

Secretary Parsons: The following applications for life membership because of fifty years' practice and thirty years' membership have been received:

L. H. Heetland of Sibley  
W. R. Koob of Brayton  
Peder Soe of Kimballton  
W. J. McGrath of Elkader (deceased)  
Murdoch Bannister of Ottumwa  
C. W. McLaughlin of Washington  
F. A. Hubbard of Columbus Junction.

The following applications for life membership because of disability have been received:

James Dunn of Davenport  
F. E. Burbank of Pleasantville  
Thaddeus A. Minassian of Des Moines  
Herbert W. Canfield of Baxter  
O. F. Parish of Grinnell  
F. L. Vander Veer of Janesville.

Dr. Braunlich: The delegates of Scott County wish to withdraw the name of Dr. James Dunn. I move it be withdrawn.

The Speaker: The delegate from Davenport wishes to withdraw the name of Dr. James Dunn.

Secretary Parsons: Can that be withdrawn without written notice?

The Speaker: The Speaker will have to inform the delegate from Scott that we should have an official notice of that withdrawal from the county medical society. Do you wish to make any further explanation of it?

Dr. Braunlich: Mr. Speaker, when Dr. Dunn's name was proposed at the Scott County Medical Society, it was understood by the Society that anyone incapacitated, who could not practice further was eligible to life membership. Under that circumstance, a letter was written to the Secretary of the Iowa State Medical Society proposing his name.

At a subsequent meeting of the Scott County Medical Society, the Handbook had come out, and under the rules and regulations for life membership in the State Society an applicant must have practiced fifty years and have been a member of his local society and state society for a period of thirty years, or be unable to practice and the payment of dues would work a hardship upon him. It was felt by the members that the payment of dues by Dr. Dunn would not be a hardship and for that reason action was taken and his name withdrawn.

Dr. Woodward: These life membership applications must be affirmatively voted by the county society. Have all these names been recommended by the county society?

Executive Secretary McCord: Yes, they have.

Dr. Braunlich: Mr. Speaker, there is no fight on in trying to keep Dr. Dunn out of the Medical Society. It is simply that he doesn't qualify under the rules of the Iowa State Medical Society. Unfortunately, our secretary has not written to the Secretary of the Iowa State Medical Society withdrawing Dr. Dunn's name. There are two other members present here who can verify what I am saying.

The Speaker: The Speaker will rule that, because the request has been made by a delegate from that county medical society and it is supported by other members of the county medical society, the name of Dr. Dunn will be withdrawn from the list. Do I hear a second?

*The motion was seconded, put to a vote and carried.*

The Speaker: May I have a motion that the names as read, omitting this one, be approved for Life Membership?

Secretary Parsons: I will so move.

*The motion was seconded, put to a vote and carried.*

The Speaker: At this time, gentlemen, I will ask the President to introduce a prominent guest. Dr. Bernard.

President Bernard: Mr. Speaker, Members of the House: Ever since the announcement of the reorganization of the Veterans Administration, it has been my heartfelt desire to bring to you one of the two men who have done more towards helping the G.I. and all the men above him toward the regeneration of their souls and their physical condition.

I have had the pleasure of knowing General Hawley for several months. I have heard him talk to various groups, and I can assure you that he has come to Iowa to help us in cooperating with him in the establishment of the greatest health program that has ever been instituted in the United States.

It is a great pleasure to introduce General Hawley.

General Hawley addressed the House of Delegates and his remarks will appear in the JOURNAL as a feature article.

The Speaker: We are under the head of new business. At this time I will request the delegate from Woodbury County to present a resolution.

Dr. Maxwell: After Dr. Hawley's very distinguished introduction to our resolutions, I am pleased to present the resolutions. I speak very definitely for one county in the state in regard to the matters because we have already discussed them thoroughly at our meetings, and we have definite instructions from our county. However, I think we are speaking not only for the county but, I believe, are expressing the sentiment of the entire state. With that in view, Woodbury County has instructed me to bring in the following resolution:

"Whereas, The Veterans Administration has inaugurated a program of decentralization in furnishing medical care to veterans, in order to allow veterans to be treated by their own local family physicians; and

"Whereas, Under this program the Veterans Administration is arranging with state medical societies to furnish such medical care through the physicians in each state; therefore, be it

"Resolved, That the Iowa State Medical Society proceed in working out an arrangement with the Veterans Administration for furnishing of medical care and treatment to veterans by local family physicians to such veterans; and be it

"Further Resolved, That the Speaker of the House of Delegates name a committee to consider the subject and report back its recommendations at the next meeting of the House of Delegates."

Mr. Speaker: I move the adoption of this resolution.

*The motion was seconded, put to a vote and carried.*

The Speaker: Without discussion, I will refer that resolution to the Committee on Medical Service and Public Relations, to be referred by it to the Veterans Committee, of which Dr. Gutch is chairman and the other members are Drs. Maxwell, McQuiston, and Honke, and I will ask the President, Dr. Bernard, to meet with that committee. Any other new business?

Dr. Woods: Mr. Speaker, Members of the House: At the meeting of the House of Delegates of the American Medical Association, December 4, 1945, an action was taken that should be of interest to all the doctors of Iowa, and especially those engaged in general practice.

Dr. William Weston, Chairman of the Reference Committee on Sections and Section Work, presented the following report:

"Your Reference Committee approves a recommendation by the Council on Scientific Assembly, and the following resolution on establishment of Section on General Practice introduced by Dr. H. A. Luce of Michigan."

Here is the resolution which was presented by Dr. Luce and which has not been published in the JOURNAL of the IOWA STATE MEDICAL SOCIETY. I have here what Dr. Lull says is the proof, which is just off the press. It reads:

"Whereas, Sixty-six and two-thirds per cent of the doctors of medicine of this nation are general practitioners, and these general practitioners constitute the



bulk of the membership of the American Medical Association; and

"Whereas, General practice is an entity of and by itself within the profession just as much as the established specialty fields and is definite in its comprehension and limitless in its extension; and

"Whereas, The organized specialty groups have set up certain restrictive rules and regulations concerning important portions of the field of general practice, which rules and regulations cannot be met and surmounted in the aggregate by the physicians who are making general practice their life's work; and

"Whereas, the organized specialty groups have assumed the position, generally, of directing the affairs of the entire profession; and

"Whereas, Forty per cent of surgery and 50 per cent of obstetrics are efficiently performed by well trained general practitioners; and

"Whereas, The public attitude is affected unfavorably by the standing inference that general practitioners are interfered with and supervised by the organized specialty groups; and

"Whereas, Efforts to date looking toward the creation of an official section of general practitioners in the American Medical Association have met with disapproval and no sufficiently good reasons have been advanced for denying the general practitioners this vital means by which they can help themselves to face and solve their own particular problems; and

"Whereas, General practitioners are constantly engaged in continuation study to increase their proficiency and are developing more suitable programs of clinical study as is evidenced by statistics from one section of the country which shows that 60 per cent of those in attendance at post-graduate courses in medicine are general practitioners; and

"Whereas, No place has been provided on hospital staffs through which general practitioners would be enabled to submit their evidence of special training in certain fields of medicine and surgery which would qualify them before the public as proficient therein; and

"Whereas, General practitioners have a special interest in medical legislation, administration and jurisdiction which justifies their particular voice being officially heard; and

"Whereas, It is not the desire of the general practitioners to disrupt the splendid variety and caliber of scientific programs of the American Medical Association but, rather, to create a new and proper basis for separate representation and participation in the general activities of the organization; and

"Whereas, The general practitioners have original contact with the majority of all patients; and

"Whereas, The people of the United States will be inclined to view with favor and good will the official recognition of their family physicians as a distinct part of the American Medical Association; and

"Whereas, The specialty fields are overcrowded with general practitioners, classified as specialists only because there is no proper classification for them; and

"Whereas, The establishment of an official Section on General Practice in the American Medical Association will stimulate a more active interest and cooperative attitude among the profession generally, making for greater unity in the advancement of the organization's program; and

"Whereas, The Council of the Wayne County Medical Society has gone on record as endorsing the introduction of these resolutions for the creation of a Section on General Practice of the American Medical Association; and

"Whereas, The Michigan State Medical Society has approved the resolution looking toward the expansion of hospital staff privileges for general practitioners throughout the state; therefore be it

"Resolved, That the House of Delegates of the American Medical Association take whatever action is proper at this time to create as soon as possible a new Section of General Practice to be constituted of equal rank and authority with the other sections already established, and that the delegates of the Michigan State Medical Society to the next American Medical Association convention are hereby instructed to introduce this resolution to that body, and that copies of this resolution be mailed to all American Medical Association delegates."

That is the end of the resolution.

"Your Reference Committee recommends that a proper amendment to the By-Laws be made to include a new section to be known as the Section on General Practice.

"Respectfully submitted,

William Weston, Chairman  
O. H. Weaver  
Hugh Smith  
Warren L. Olley"

Dr. A. A. Walker of Alabama presented the following proposed amendments to the By-Laws, which were referred to the Reference Committee on Amendments to the Constitution and By-Laws. It reads:

"In order to make effective the recommendation of the Council on Scientific Assembly creating a Section on General Practice, which recommendation has received the approval of this House, the following amendments to the By-Laws are hereby proposed:

"Change Chapter 15, Section 1, subdivision 1, to read: 'Internal Medicine.'

"Change Chapter 15, Section 1, subdivision 17, to subdivision 18, and insert a new subdivision 17 to read: 'General Practice of Medicine.'"

I have here a personal communication from Dr. Olin West, dated March 26, in the closing paragraph of which he says:

"This proposal (meaning this proposal that we have this Section on General Practice) was first submitted to the House of Delegates some three or four years ago. At two annual sessions, sessions for general practitioners were held in the Section on Miscellaneous Topics. These sessions were well attended, and the Council on Scientific Assembly, after the test had been made, recommended to the House of Delegates that a new section be established."

Mr. Speaker, in view of the fact that there has been no publicity of this either in the JOURNAL OF THE IOWA STATE MEDICAL SOCIETY or in the JOURNAL of the American Medical Association, it would seem that the general practitioner will, from now on, not only have a place but a voice in the affairs of the American Medical Association. Therefore, I ask that the report of this action of the House of Delegates of the American Medical Association be referred to the Committee on Publication, with the request that it be published in full in the JOURNAL of the IOWA STATE MEDICAL SOCIETY. I will make it in the form of a resolution.

The Speaker: The Speaker will refer this resolution to the delegates of the Iowa State Medical Society to the American Medical Association.

We are still under the order of new business. I wish at this time the Chairman of the Committee on Constitution and By-Laws would present that amendment which was left over. Is Dr. Henkin here? (Absent) Dr. Ward?

Dr. Ward: On page 22 will be found the report of the Committee on Constitution and By-Laws.

"Article V, Section 1, of the Constitution shall be amended to read as follows: The House of Delegates shall be the legislative and business body of the Society, and shall consist of delegates elected by the component county societies. They shall have the sole voting power at meetings, except that the President shall cast the deciding vote in the event of a tie vote."

The Speaker: On page 52 you will find the original. Do I hear a motion for its adoption?

Dr. Kersten: I move it be adopted.

Dr. C. A. Henry: I second the motion.

The Speaker: It is open for discussion.

Dr. Maxwell: I think it is something that is well worthwhile to discuss. It means that if our House of Delegates consists entirely of delegates, our councilors and our officers not only would have no vote but, as far as I can see, no right to speak in the House of Delegates unless they are asked to speak. After all, the councilors and the officers are the men who for 362 days out of the year carry on the business of the organization. I don't believe the question of their vote in the House of Delegates is as important as the fact that they should have the privileges of the floor and the other privileges of the House of Delegates. I am not thinking so much of the personal privileges of the officers or the councilors as of the good of the organization. I myself believe that they should have not only the right to be here and speak but to vote.

The Speaker: You probably are already informed that we have 106 delegates and 20 officers, making a total of 126.

Is there any other discussion? Does the one who presented the amendment care to discuss it?

Dr. Caughlan: This amendment was discussed very thoroughly at home, and Dr. Hennessy and I talked it over a great deal. When he was President-Elect we had seen a tendency toward centralization of control of the House of Delegates, as evidenced by this block of twenty votes. I don't think that has been abused at all. There was never any question about that, but we thought it was possible that it could be abused. We thought, too, that the average delegate coming here, seeing these people here year after year, feeling they had a great deal of power, would feel that he didn't amount to very much. He had very little interest in the proceedings of the House of Delegates and frequently didn't stay for the Friday morning session, which is the election morning.

For that reason, we felt that the councilors chosen by delegates and officers chosen by delegates should not be in position to vote against the will of the delegates. That was the reason for introducing this amendment. I think the amendment is a good one. Every man I have talked to has agreed that it is a good amendment, and I would ask your support of it.

The Speaker: Any further discussion?

Dr. Marker: I speak as one who has been an officer for a long time. I can't see the advisability of passing this. I am speaking of the anomalous position in which you would place this Society if you pass the resolution. For instance, you are going to amend the rule which states what the House of Delegates is but you are not making any change in Chapter VIII of the By-Laws. You will find on page 64 what the Executive Council is and what it should do. You are going to have one body authorized to make motions, discuss questions, pass on them at the time of the state meeting of the House of Delegates, and you are going to have an entirely different



body that has equal power with it for the rest of the time in the year. As Dr. Maxwell said, for 362 days in the year they have the power to undo, if they should choose to do so. We are not ready to pass this, even though the men feel that it might be a good thing to do for the Society. I doubt myself that it is, but this resolution, as it is, is incomplete.

I move that we refer this to the Committee on Constitution and By-Laws, to be presented to the next meeting.

*The motion was seconded.*

The Speaker: It has been moved and seconded that this proposed amendment be referred back to the Committee on Constitution and By-Laws.

Dr. Ward: Mr. Speaker, the Committee on Constitution and By-Laws felt it should be considered by the House. According to the Constitution, it has to be considered by the House.

Dr. Caughlan: In connection with that motion, I see no reason for waiting any longer. It has gone through the proper form. It was presented; it was published in the JOURNAL; it is in the Handbook. It has laid over for a year. I don't see any reason for postponing action on it any longer. I see no reason why we should postpone it at all, unless there might be a disposition on the part of people to drum up a little support against it.

The Speaker: I will ask those in favor of the motion as made to stand. That refers to the motion to refer it back to the Committee on Constitution and By-Laws for further study. Those in favor of the motion stand; those opposed. *The motion is lost.*

That brings us to vote on the proposed amendment. Has any delegate come in who has not registered or turned in a card? I will ask those in favor of the proposed amendment to stand and remain standing while the Secretary counts them. Those opposed to the proposed amendment stand. I will ask the Secretary to announce the vote.

Secretary Parsons: Those for the amendment, 26; those against the amendment 30.

The Speaker: *I declare the motion lost.* We will proceed with new business. Any new business?

Dr. L. F. Hill: Mr. Speaker, Members of the House of Delegates: I would like to take just a moment of your time to solicit the support of the House of Delegates for a survey of services available for children which is currently being undertaken by the American Academy of Pediatrics. This survey is by doctors, the first one of its kind, I think, that has ever been undertaken. It is being conducted by the American Academy of Pediatrics throughout the entire forty-eight states. The state chairman in each state will be the individual who has direct charge of conducting the survey.

I think it may be apparent to all of you why the Academy is interested in having the survey. The Academy wants to determine for itself what facilities are available for children in the various parts of the country and what services are not available for children. They would like to be in a position, when propositions are made from various sources as to the needs of children, to speak with authority. The survey is already under way in some twenty states, and has been completed in one state. It is a rather extensive job; it is going to entail a lot of work and will need the cooperation of every physician in Iowa. It hasn't been started in this state.

We felt the first thing we should do was to secure the approval of such a survey by this body of representatives of the Iowa State Medical Society.

Not only is the Academy interested in learning what hospital facilities are available for children in both rural and urban areas and what facilities are not available for children, but it also wants to learn something about medical education, to learn about other facilities that may or may not be lacking, where those are, in what areas the needs are greatest and what those needs are.

I don't want to take further time, Mr. Speaker. If there are any questions, I will be glad to answer them. Approval of the American Medical Association is being secured. We already have tacit approval in that Dr. Fishbein went to that for us when we were seeking some funds for the National Foundation for Infantile Paralysis. The Academy put \$20,000 of its own funds into the survey. Many of the commercial institutions of the country are financing it. The National Foundation for Infantile Paralysis has financed us to a considerable extent. It will require cooperation of all groups in the state. We do want to have the approval of this body and, more than that, we do want to seek the support of every one of the general practitioners of the State Society.

The Speaker: Thanks, Dr. Hill.

Dr. Downing: I move that this body approve the survey.

*The motion was seconded, put to a vote and carried.*

President Bernard: I don't know whether the delegates know that a signal honor has come to Dr. Lee Hill, an honor which honors us as well as Dr. Hill. He is the President-Elect of the American Academy of Pediatrics. Let's give him a hand.

Dr. Hill: Thank you very much. May I say Dr. Dyson, whom I see in the room, is the state chairman of the American Academy of Pediatrics for the State of Iowa.

The Speaker: Dr. Bernard has a resolution to present. President Bernard: I wish to present the following resolution:

*"Whereas*, There now exists under the direction of the Iowa State Board of Social Welfare a program for the medical care of chronic diseases of old age recipients;

*"Whereas*, The present plan of payment for medical service rendered is based upon the predetermination of severity and extent of medical care needed for each individual; and

*"Whereas*, Under this system too large a percentage of money allocated for medical care is used for other purposes; and

*"Whereas*, It is the firm belief of the members of the House of Delegates of the Iowa State Medical Society that more adequate medical service can be rendered to old age recipients and public money conserved by following a plan of postpayment for medical care; therefore be it

*"Resolved*, That the members of the House of Delegates of the Iowa State Medical Society here assembled respectfully request the Iowa State Board of Social Welfare to change the present method of predetermined cost to a post-payment system for medical service."

Dr. Coffin: *I so move.*

*The motion was seconded, put to a vote and carried.*

The Speaker: There will be a luncheon Friday noon where this will be discussed more freely with Dr. Channing Smith, who is medical consultant for the Iowa State Board of Social Welfare. Are there any more resolutions or new business to bring up? If not, it is time for the election of the Nominating Committee. As Secretary for many years, I found that one of my greatest difficulties was to get you delegates from the different districts to meet in caucus and report your choice of a member of the Nominating Committee to the Secretary.

We will now determine the time of meeting for the next session. Do you want to meet Friday morning at seven-thirty or eight? ("Eight.") The next meeting will be Friday morning at eight o'clock in this same room.

Dr. Bernard has another guest he wishes to introduce.

President Bernard: Mr. Speaker and Gentlemen: We are fortunate tonight in having present the President of the Missouri State Medical Society. I have known him quite a while. He is dynamic, full of fight and, most fortunate of all, he flew from Washington today after appearing before the committee which is discussing the Wagner bill. I am sure you will be very much interested in his remarks.

It is with great pleasure I introduce Dr. Bristow, President of the Missouri State Medical Society.

Dr. A. S. Bristow: Thank you deeply, President Bernard. It has always been a privilege to appear before sister states' medical men in an attempt at solving some of our problems.

I appear humbly tonight following General Hawley, a man who dynamically augments and magnifies any medical meeting by the sincerity of his purpose, by the deepness of his understanding of medical problems.

American medicine today most certainly is in a transition period to us who have been privileged to follow medicine for the last twenty-five or twenty-eight years. From the inception of our training in medicine we have been steeped in individualism. The aspiring medical student must first pass an aptitude test. He must attain one of the 5,200 places in medicine from 45,000 applications. He must work hard to stay in there and if, by his own work, he may get through medicine, he is faced with this examination and that examination to determine his fitness to enter this group of ours. Individual, yes—highly so.

The concept of individualism is that only the individual thinks, only the individual is able to digest that which he reads; only the individual can form judgment. When we get into group thought, it is always a compromise. Are we now up against compromised thought? It looks somewhat that way.

Missouri medicine was given an unusual privilege this week. Six of us have been in Washington since Sunday. Our dynamic Senator Donnell is carrying the burden of the packed Committee on Education and Labor. He may have help in one other Senator, Senator Wayne Morse from Oregon, who, by his questioning in committee, may make you think one way or the other. He is quite an astute individual. Our own Senator Donnell is carrying the load for all of medicine in the committee.

Will this health bill get out of the committee? There is a possibility it will get through the Senate.

As to the House of Representatives, I can only speak for a small group. Each and every one of our Congressmen from the sister state of Missouri is opposed to it. If that be a cross section of thought, I believe it will be beaten in the present legislative body in the event that it does come out of committee. That is my personal opinion only, gentlemen.

All right, where are we? What have you practicing physicians in the state of Iowa done toward a solution? Have you ever thought why the individual patient thinks, perhaps, rather highly of his personal physician but when American medicine as an organization is mentioned, he reacts much like a bull before a red flag? Why is that?

An analysis would seem to tell us that we have been obstructionists, but, while obstructing, we have never offered a solution. Do we now have the solution? We

have made our mistakes of omission, not commission. Do we have the answer? The very, very powerful influences at work now in Washington say no. Green yesterday morning picked full of holes our voluntary system which we advocate. Is it the solution? We trust so.

You must remember that even the Wagner-Murray-Dingell bill does not cover the United States. Only between 80 and 90 per cent of the people are covered. You will still have on your hands the patient who can't pay a dime, and he will receive the same type of care that doctors have always given him. I doubt if a person in the United States has died because of lack of any medical care. In some instances there may have been labor accidents in which better care might have been received.

The medical profession has no bones to pick with the extension of hospital care; we are wholeheartedly back of it. We have no bones to pick with the enormous expenditures of money in research for poliomyelitis, arthritis, tuberculosis, cancer, or whatever else you have. There is only one thing that we are definitely against, and that is the wholehearted, political, socialized medical scheme.

Any time the politician takes over your business and my business, will the people have better medicine? Will they have free choice of physicians? Are all of you going into it? You in Iowa have your Blue Cross plan. It has worked remarkably well in the state of Missouri. We have over one million now enrolled. Our prepaid medical and surgical service plans have not gained as rapidly as we had hoped, but that is because the ordinary doctor has refused or up until now has not accepted his full share of responsibility for its spread.

Twenty-five years ago I didn't think a doctor would be forced into doing other than practicing medicine. Today, however, he must be a public relations expert, a counsel to the world, a counsel to each and every one of his patients. Are you ready to accept that responsibility? Have you done your share, not only as a state organization but as an individual, in contacting your Congressmen? Don't just say, "I am against it." Why are you against it, or what do you have to offer for the solution?

Until such time as the medical body offers a solution to this problem, or if we do not offer one, the government is going to do it for us. Are you ready to accept your responsibility?

The Speaker: Any further items under new business? If not, we declare ourselves recessed.

... The meeting recessed at ten forty-five o'clock, and the delegates caucused for the purpose of electing a Nominating Committee. ...

#### Friday Morning, April 19, 1946

The meeting convened at eight-fifteen o'clock, Dr. Parker presiding as Speaker.

The Speaker: The House will please come to order. The first order of business will be the roll call. Mr. Secretary.

... Secretary Parsons called the roll which showed the following members present:

#### HOUSE OF DELEGATES

##### DELEGATES

Allamakee—J. W. Thornton  
Audubon—W. H. Halloran  
Black Hawk—E. E. Magee  
Buchanan—R. L. Knipfer  
Cerro Gordo—L. R. Woodward  
Chickasaw—P. E. Gardner  
Clarke—C. R. Harken  
Clinton—R. F. Luse  
Dallas-Guthrie—C. E. Porter  
Davis—G. P. Reed  
Des Moines—F. G. Ober  
Dickinson—T. L. Ward  
Dubuque—D. C. Konzett  
Emmett—M. T. Morton  
Fayette—J. P. Gallagher  
Floyd—J. B. Miner, Jr.  
Fremont—Kenneth Murchison  
Howard—F. E. Giles  
Humboldt—L. T. Schultz  
Jefferson—L. D. James  
Johnson—S. C. Cullen  
Johnson—J. W. Dulin  
Johnson—A. W. Bennett  
Keokuk—D. L. Grothaus  
Lee—L. C. Pumphrey  
Linn—J. K. von Lackum  
Louisa—L. E. Weber  
Lucas—H. D. Jarvis  
Madison—I. K. Sayre  
Marion—E. C. McClure  
Marshall—A. D. Woods  
Monroe—T. A. Moran  
O'Brien—W. R. Brock  
Pocahontas—W. F. Brinkman  
Polk—J. C. Parsons  
Polk—L. F. Hill  
Polk—W. R. Hornaday  
Polk—C. W. Losh  
Pottawattamie—G. V. Caughlan  
Sac—J. R. Dewey  
Scott—W. C. Goenne

Scott—George Braunlich  
Story—J. E. McFarland  
Union—C. C. Rambo  
Van Buren—L. A. Coffin  
Wapello—C. A. Henry  
Warren—E. E. Shaw  
Washington—W. L. Alcorn  
Webster—E. M. Kersten  
Winneshek—F. A. Hennessy  
Woodbury—A. Q. Johnson  
Woodbury—C. T. Maxwell  
Worth—S. S. Westly

##### ALTERNATES

Boone—R. S. Shane  
Bremer—P. J. Amlie  
Buena Vista—H. E. Farnsworth  
Butler—J. G. Evans  
Cass—R. L. Barnett  
Davis—C. H. Cronk  
Jasper—J. W. Billingsley  
Kossuth—T. J. Egan  
Mahaska—F. O. W. Voigt  
Palo Alto—H. L. Brereton  
Plymouth—M. J. Joynet  
Polk—C. B. Luginbuhl  
Ringgold—J. W. Hill  
Taylor—G. W. Rimel

##### STATE SOCIETY OFFICERS

President—R. D. Bernard  
President-Elect—R. L. Parker  
Secretary—J. C. Parsons (Delegate)  
Treasurer—J. A. Downing  
Trustee—J. I. Marker  
Trustee—W. A. Sternberg  
Trustee—L. R. Woodward (Delegate)  
Councilor—L. L. Carr  
Councilor—C. H. Cretzmeier  
Councilor—J. B. Knipe  
Councilor—R. N. Larimer  
Councilor—E. F. Beeh  
Councilor—J. C. Hill  
Councilor—H. A. Housholder  
Councilor—C. A. Boice  
Councilor—R. C. Gutch  
Councilor—W. S. Reiley

Dr. Woods: Mr. Speaker, before we proceed to the next order of business, may I ask how many delegates are seated?

The Speaker: We haven't had time to make a tabulation. It will be announced.

Dr. Woods: May we have how many officers are seated? I would like to ask some questions before we proceed to vote.

The Speaker: The strength of the House will be announced as soon as a tabulation is made.

The next order of business is the reading of the minutes of the last meeting, Mr. Secretary.

... Secretary Parsons read the minutes of the Thursday evening meeting ...

The Speaker: Are there any corrections to the minutes as read? If not, they will stand approved.

I would like at this time to authorize the Secretary to send word to Dr. M. C. Hennessy who is ill. May I ask the approval of the House for such a recommendation?

Dr. Johnson: Mr. Chairman, I so move.

*The motion was seconded, put to a vote and carried.*

The Speaker: The announcement of the roll call.

Secretary Parsons: There are 53 delegates and 14 alternates seated, and 17 officers present.

Dr. Woods: Mr. President, may I ask what percentage of the total delegates is present?

The Speaker: The House consists of 106 delegates and 20 officers, making a total of 126.

Dr. Woods: Let's stick to the delegates for the moment. There would be 106 and there are 70 seated.

Executive Secretary McCord: There are 67 seated.

Dr. Woods: That gives us a percentage of what on the delegates?

Secretary Parsons: Sixty-three per cent.

Dr. Woods: How many officers are seated, Mr. Speaker?

Executive Secretary McCord: Seventeen.

Dr. Woods: What is the total?

The Speaker: Twenty.

Dr. Woods: What is the percentage there?

Executive Secretary McCord: Eighty-five per cent.

Dr. Woods: Eighty-five per cent! That is all, Mr. Speaker.

The Speaker: The next order of business is the report of the Committee on Nominations, Dr. Shaw.

Dr. E. E. Shaw: Mr. Speaker, report of the Nominating Committee.

"The Nominating Committee of the Society met in Parlor A at ten a. m., April 18. Those present were: J. W. Thornton of Allamakee, S. S. Westly of Worth, M. T.



Morton of Emmet, C. F. Obermann of Cherokee, E. F. Beeh of Webster, J. C. Hill of Jasper, D. C. Konzett of Dubuque, W. C. Goenne of Scott, C. A. Henry of Wapello, E. E. Shaw of Warren, and G. V. Caughlan of Pottawattamie.

"Dr. E. E. Shaw was elected chairman and Dr. J. W. Thornton secretary. After due discussion, the committee nominated the following persons:

President-Elect: J. I. Marker of Davenport; L. A. Coffin of Farmington; H. A. Spilman of Ottumwa.

First Vice President: J. W. Billingsley of Newton.

Second Vice President: H. I. Down of Sioux City.

Trustee: L. R. Woodward of Mason City.

Councillors: E. F. Beeh and J. G. Macrae.

Delegates to the American Medical Association: T. F. Thornton of Waterloo; George Braunlich of Davenport.

Alternate Delegates to the American Medical Association: G. C. Albright of Iowa City; E. M. Kersten of Fort Dodge.

"Respectfully submitted,

"E. E. Shaw, M.D., Chairman"

The Speaker: A motion to approve the report of the Nominating Committee will be considered. Do I hear such a motion?

Dr. L. F. Hill: I so move.

*The motion was seconded, put to a vote and carried.*

The Speaker: The next order of business is the election of officers. Are there any nominations from the floor before we proceed? I hear none; we will proceed with the election of officers. I will appoint as tellers Dr. Shaw, Dr. Sayre, Dr. Downing, Dr. Magee and Dr. Johnson of Sioux City.

Your first ballot will be for President-Elect. The three names will be placed on the blackboard.

Secretary Parsons: Are there any delegates who have come in since the roll call who have not announced their county and name to the Chair?

... The delegates proceeded to cast their ballots ...

The Speaker: Have you all voted? If so, I will declare the ballot closed and the tellers will proceed.

... The tellers proceeded to tally the votes ...

Secretary Parsons: There were 33 votes cast for Dr. Spilman, 23 votes for Dr. Marker and 20 votes for Dr. Coffin.

The Speaker: No candidate having a majority, we will proceed to ballot again on the names of Dr. Marker and Dr. Spilman. Please prepare your ballots.

... The delegates proceeded to cast their ballots ...

The Speaker: Have you all voted? If so, I will declare the ballot closed and the tellers will proceed.

... The tellers proceeded to tally the votes ...

Secretary Parsons: Mr. Speaker, the result of the election shows that Dr. Spilman has the majority of the votes cast.

Dr. Marker: Mr. Speaker, I move that we make the vote unanimous for Dr. Spilman as President-Elect.

Dr. Coffin: Mr. Speaker, I second that motion.

The Speaker: It has been moved and seconded that Dr. Spilman be declared President-Elect unanimously. Those in favor say "aye"; oppose the same sign. The motion is carried and Dr. Spilman is your newly elected President-Elect. Is Dr. Spilman in the house? Is Dr. Henry in the house? Dr. Henry, will you please escort Dr. Spilman to the house? We will proceed with the further elections. It would be proper at this time, members of the House, to have a motion that the candidates as named by the Nominating Committee be duly elected.

Dr. Dewey: I move that the balance of the slate be elected.

*The motion was seconded, put to a vote and carried.*

The Speaker: The candidates as announced are duly elected.

President-Elect Spilman was escorted to the rostrum.

The Speaker: Your newly elected President-Elect, Dr. Spilman.

... The audience arose and applauded ...

President-Elect Spilman: Gentlemen, I certainly thank you. I realize that this is a time when the office of President-Elect will require a great deal of work, and there is attached to it a great deal of responsibility. I will do the best I can, with the help of all of you gentlemen. Thank you.

The Speaker: The next in order is reports of committees. I will ask Dr. Morgan to make a report for the Field Army at this time.

Dr. Morgan: Mr. Speaker, most of you know that the cancer work has been expanding a great deal lately, particularly if you have read some of the national magazines and have paid some attention to the radio. In Iowa we are also expanding this year. We have as campaign chairman Mr. A. H. Blank, head of the Tri-States Theatres and the man who donated the Blank Memorial unit to the Methodist Hospital here. He is doing a wonderful job, has already raised in Des Moines more money than we raised in the entire state last year. Consequently, we are going to have a much larger sum of money to spend on cancer work in Iowa than we have ever had in the past.

This cancer program has the backing of a large proportion of the general public. It is becoming the number one health project of the lay people, taking precedence over tuberculosis and poliomyelitis in the nation as a whole. Because of this, we must keep contact in the medical society for this program, and we must keep control.

The national setup is arranged in such a way that the medical society is represented very largely on the board of directors; in fact, it has a majority of the votes.

In the State Society for twelve or fifteen years we have had a Cancer Committee which has organized and carried on this work in the state. We have even had to go out and raise the funds sometimes to keep the organization going. During the past year our most notable achievement has been the publication of a manual on cancer for the lay public. This has been a cooperative effort on the part of the Field Army, the State Department of Health and the State Medical Society. You folks very generously helped us with \$1,000 to publish this manual. It is now off the press, has been received very graciously by those who have seen it, and is being considered for general distribution in other states as well as in our own.

Some of you have had contact through the years with the old American Society for the Control of Cancer. That society no longer exists. We now have an American Cancer Society which has been completely reorganized. We have a board of directors that is active and aggressive. Some of the men who were in the old organization are no longer with it. We have an aggressive program being carried on nationally, for the first time in a long time.

Tomorrow I am supposed to represent the medical profession of Iowa in electing the delegates to the national organization. For the first time in the history of this organization, delegates are going to have something to say about how the organization is going to be run.

The campaign of the Field Army of the American Cancer Society is already under way. This is our cancer month. You men will be asked to contribute and to help and support the work in your respective counties, and we are asking you to consider it very carefully and help in every way that you can. If we reach the goal for Iowa this year, we will have received the sum of \$204,000; 60 per cent or approximately \$120,000 of it will remain in Iowa for our own use.

The funds that are retained in Iowa are not retained on the same basis as in the infantile paralysis and the tuberculosis groups. The funds are all maintained at a state level. Projects in any part of the state must be approved by the state committee and by the national organization. We are not expected to have some funds tied up in county banks; we are expected by the national organization to spend all of the money we receive in any one year, during the course of that year, with the exception of a small amount for maintenance of an office and for the carrying on of the next year's campaign. So, we hope to have an active, aggressive campaign.

Our President is making appointments to the Cancer Committee which will be somewhat different this year. This committee will be tied in very, very closely with the Field Army; in fact, there is an interlocking board of directors so that we will control the service program which is to be carried out in the State of Iowa.

I think the research program, which is being carried out on the national level, has a great deal to commend it. Most of the 40 per cent of the funds—all but about 7 per cent used for administrative expenses—is to go for research and education and service to cancer patients. The research program has been set up by the National Research Council to study the broad program of growth, growth in all its aspects, both pathologic and physiologic. A number of the scientists who worked on the atomic bomb project have already been hired on fellowships, scholarships and so forth, to work on this program. You all have heard of the radioactive materials which have been developed and obtained in large quantities as a result of this bomb project. For the first time we have these substances in large numbers and large amounts, so that we can do some work along that line. That work is already in the process of development, and some of the scientists are already working.

We have hopes to implement this program and have a great deal more research work done. The national commercial research laboratories of some of the pharmaceutical houses are also undertaking various phases of this program, and it is our hope that within a period of five or six years we can accomplish a research program which would normally have taken from thirty to fifty years to accomplish.

In our state program we are not stressing research as yet; we are stressing the educational program and the expansion of services to cancer patients. On the educational program, I have told you about our cancer manual. We have done a great deal on that, and we think we have accomplished something there.

The thing that I want to bring to you, in particular, at this time is the possibility of establishing throughout the state what we call detection centers as distinct from cancer clinics. The detection center idea has already been approved by the Executive Council of the Iowa State Medical Society and by the American Medical Association, the Executive Council voting in a mail ballot to support this program. I want to tell you a little about it.

The detection center is an organization which can be run by the county medical society and only by the county



medical society. It will not be established in any county without the approval of the county society in that area.

It has several advantages. It can be run by a general practitioner rather than a specialist. It does not require the services of specialists. The detection center does not diagnose cancer. Any patient can be referred to it or can come to this clinic for an examination. Blanks will be furnished and a history taken, which is aimed primarily and only at the discovery of the cancer. In the case of women, a pelvic examination must be made. The report is not given to the patient but to the patient's physician. If the patient has no physician, then the doctors in the county are chosen in rotation.

The function of the detection center is to give people an opportunity not only to go to the private physician but to a detection center and have this examination done. The recommendations go to the doctor who then either does what is recommended or refers the patient to somebody else.

We are in hopes that some of these detection centers, after they are established, will develop into tumor clinics, which is a different thing entirely. The tumor clinic, as approved by the American College of Surgeons and as established already in some of our cities by the State Department of Health, is an entirely different thing. It undertakes the actual diagnosis of cancer and treatment, if necessary and desirable, of the patient. There is such a clinic in Broadlawn Hospital here. There is one in Cedar Rapids. Dubuque is establishing one. Sioux City already has one. There are a number of others that have been established. They require the services of a number of specialists in x-ray, pathology, surgery, internal medicine, eye, ear, nose and throat, and other men working as a cooperative unit.

Both of these units have a great deal to do with teaching and giving information on cancer, both to lay people and to our physicians. Frankly, those of us who have been working with cancer for a long time have the feeling that the lay public is a little bit ahead of many of the doctors of the state in this cancer information. We hope, then, to use these centers as a means of educating the doctors and the lay public.

We would like your approval of this cancer program and a continuation of the program as I have briefly outlined it. Thank you.

The Speaker: The next order of business will be the report of the Reference Committee on Veterans Administration Contract, Dr. Gutch.

Dr. Gutch: Mr. Speaker, Members of the House of Delegates: Before I read this report, may we give Dr. Honke the floor to explain part of the committee report? Dr. Honke is a member of the committee.

The Speaker: Dr. Honke is a member of the committee although not a delegate. Because of membership in this committee, the Speaker will grant him the privilege of the floor so that he may make this additional report. Dr. Honke.

Dr. Honke: The committee met yesterday afternoon at one-thirty, and the following men were present: Major General Hawley, Dr. Einar Andreassen of Minneapolis (Medical Director for the Minneapolis District, of which Iowa is a member), and the following doctors from Iowa: M. I. Olsen, Fred Sternagel, C. A. Boice, J. C. Hill, J. W. Billingsley, H. A. Spillman, R. C. Gutch, A. E. Sulek, J. S. McQuiston, C. T. Maxwell, R. D. Bernard, and myself.

We met and considered the subject that was referred to us last Wednesday evening. Dr. Gutch, our chairman, will report to you our recommendations as soon as I finish these few remarks. He has asked me to preface the recommendations with a few explanatory remarks so that all of us will have a clearer understanding of what they encompass.

The objects and the implications of what is proposed are far-reaching and have untold possibilities. Some of the things we hope to accomplish by the formulation of such an agreement are to furnish better professional care to the veteran by a physician of his own choice; to allow him a free and unrestricted choice of his own physician; and to give more economical care to the veteran. By "economical care" I don't mean to infer that the economy will be on the part of the doctor's fee but it will be more economical from the standpoint of administration than it would under a widespread or enlarged bureaucratic system of government medicine.

We hope to minimize delay in the securing of medical care for the patient. We can minimize delay by giving him immediate care in his own home community. He will not have to be transported to a distant veterans' hospital. He will not have to wait for a possible vacancy to appear, and he can secure emergency care when it is necessary.

There is going to be a large amount of money expended in the care of the veterans, and it is going to be expended in one way or another. By formulating such an agreement as proposed, we hope to provide for a much wider dissemination of these funds throughout the country and to eliminate the large expenditure of funds in concentrated areas. I think that will be a valuable feature. The funds that are expended will be given to the doctor or paid to the doctor and will not be utilized to such a large extent in administration.

As you know, the Veterans Administration now has approximately 100 hospitals of varying bed capacities. It has a tremendous building program proposed which has already passed Congress. Construction, on a widespread

basis, of additional government hospitals would provide the government further opportunity to obtain an inroad into the private practice of medicine.

If we can formulate an agreement like we propose and get it to function satisfactorily, we hope to minimize the necessity for such widespread construction of government hospitals.

Nebraska has a contract which is to be considered at its state meeting, and I believe almost all of the states are planning to negotiate contracts at the time of their state meetings. There is a possibility that if we can get these contracts functioning satisfactorily, we can minimize the necessity for any construction other than is now planned. I don't believe we can alter the proposed plans which have already been approved by Congress.

I want to point out that in the proposal we are submitting here this morning, Iowa Medical Service will act only as fiscal agent for the State Society, and the fee schedule is entirely separate from that of the Iowa Medical Service prepayment plan. Any doctor who wishes to participate in the veterans' program will have to be a licensed physician in the state of Iowa, a licensed M.D., but he need not be a participating physician of the Iowa Medical Service prepayment plan, and neither need he be a member of the Iowa State Medical Society.

If our proposed contract is consummated, the doctors throughout the state will receive a sheet of instructions, telling them how to register with Iowa Medical Service in order to participate in this program. The fee schedule which you all have is the fee schedule which we suggest using in the negotiation. There is no fee schedule in the world which will satisfy everyone. However, during the course of the year the various components of the State Medical Society can either collectively or individually make recommendations for readjustment at the time of the negotiation or renegotiation of the next contract, which will probably be one year from now.

The fee schedule was tentatively arrived at after giving due consideration to the plans and contracts already in force in the states of Kansas, California and Michigan. We also considered the proposed fee schedule and contract of the state of Minnesota and the proposed fee schedule and contract plans as suggested by Woodbury County.

The Iowa Medical Service prepayment plan fee schedule was not used because the committee was of the opinion that that fee schedule was made for the near indigent group and had no place in the formulation of any such contract as is now suggested.

After considering all of the various state contracts, such as Kansas, Michigan, and California, the following plan was formulated. It is almost identical with the Michigan plan. We gained the impression from General Hawley that it was very satisfactory. I should like to read it to you.

To the Administrator of Veterans Affairs:

The Iowa Medical Service agrees to make available during the period ending June 30, 1947, all services outlined below in accordance with the terms and conditions hereinafter prescribed:

(1) The Iowa Medical Service will arrange, through physicians licensed under Chapter 116, Code of Iowa, 1939, or similar statutes of other states and registered with it for the rendition of the medical services covered by this agreement, for examinations, treatments and counsel in such cases as may be authorized by the Veterans Administration. Iowa Medical Service reserving the right, however, to decline any particular case.

(2) The Veterans Administration will authorize examinations, treatments and counsel. Authorizations for such services will be issued to the Iowa Medical Service; the Iowa Medical Service will advise the veteran to report to a physician of the veteran's selection in his community, such selection to be limited to those physicians registered with the Iowa Medical Service for the rendition of services under this agreement.

(3) The Iowa Medical Service will be responsible to see that reports required by the Veterans Administration are in proper form and that proper records are maintained which will be available for review by the Veterans Administration at any time. The Veterans Administration will review reports of services and will return to Iowa Medical Service for further action, without additional cost to the Veterans Administration, those which do not meet the requirements of the Veterans Administration.

(4) Fees for medical services will be in accordance with the fee schedule, which is attached hereto and made a part of this contract. It is understood that unusually involved cases and services not scheduled will be subject to review and recommendation by Iowa Medical Service to the Veterans Administration for determination of appropriate fee.

(5) The Iowa Medical Service will make payment to the individual physicians for services rendered on all cases in which authorizations have been issued and will in turn bill the Veterans Administration at the end of each month. Veterans Administration will remit in accordance with such bill within a reasonable time after receipt thereof.

(6) The Iowa Medical Service contemplates that the performance of this contract will be without profit to it and if operating results are at variance with this intention revisions will be proposed to produce such a non-profit operation.

It is impossible to determine the exact or estimated amount which will be expended under this contract. How-



ever, it is understood that upon acceptance of this proposal, the Veterans Administration will issue authorizations for such services as are necessary and Iowa Medical Service will carry out its undertaking hereunder.

This contract shall become effective as of ..... 194.., and may be terminated by either party by giving thirty (30) days written notice to that effect.

This contract, if mutually satisfactory, may be renewed indefinitely for periods of one (1) year each, upon notice in writing to the contractor at least sixty (60) days prior to the expiration of each period of one (1) year, and written statement from the contractor within thirty (30) days after such notification agreeing to the renewal.

NOTICE TO BIDDERS—Prices bid should include any applicable federal excise taxes, as the United States is not exempt from payments of such taxes.

No member of or Delegate to Congress, or Resident Commissioner, shall be admitted to any share or part of this contract or to any benefit that may arise therefrom unless it be made with a corporation for its general benefit.

Iowa Medical Service agrees that in performing this contract it will not discriminate against any employee or applicant for employment because of race, creed, color or national origin, and that it will include a similar provision in all of its subcontracts.

IOWA MEDICAL SERVICE

By: .....

.....

(Title)

APPROVED AND ACCEPTED.

VETERANS ADMINISTRATION

.....

Director of Supplies

.....

Dr. Honke : This contract, if it is accepted by the House of Delegates and approved, will then have to be submitted to the Veterans Administration which has a council which will review this. It may ask for small revisions but the general impression we got yesterday, after Dr. Andreassen and Dr. Hawley went over the contract and the fee schedule was that it seemed fair and equitable to them, and we do not anticipate many adjustments.

Dr. Gutch: This is the recommendation of the Subcommittee on Veterans Care of the Medical Service and Public Relations Committee.

1. It is recommended that the House of Delegates of the Iowa State Medical Society authorize the negotiation of a contract with the Veterans Administration for the rendering of such care to veterans as may be authorized by the Veterans Administration.

2. It is further recommended that the Subcommittee on Veterans Care of the Medical Service and Public Relations Committee be authorized to make such adjustments in the proposed contract as necessary.

3. It is further recommended that the Iowa Medical Service be the fiscal agent to negotiate and administer such a contract.

R. C. Gutch, Chairman

E. M. Honke

J. S. McQuiston

Dr. Gutch: I move that the report as read be approved, Mr. Speaker.

The Speaker: It has been moved that this report be approved. Do I hear a second?

Dr. Morgan: I second it.

The Speaker: Any discussion? If not, all in favor of this say "aye"; opposed the same. *The motion is carried.*

Dr. Shaw: Dr. Morgan, in the report of the Cancer Committee, requested that the House of Delegates approve the continuance of this program under that committee. I move that the House of Delegates express its approval and authorize a continuation of the program as requested by Dr. Morgan.

*The motion was seconded, put to a vote and carried.*

The Speaker: The next is the report of the Reference Committee on American Medical Association Delegates, Dr. Thornton.

Dr. Thornton: The delegates to the American Medical Association have read carefully the material presented by Dr. A. D. Woods relating to the establishment of a Section on General Practice by the American Medical Association, and recommend that it be referred to the Publication Committee for consideration for publication in the JOURNAL OF THE IOWA STATE MEDICAL SOCIETY.

T. F. Thornton, Delegate

T. A. Burcham, Delegate

J. E. Reeder, Delegate

I move the adoption of this report.  
*The motion was seconded by Dr. Evans, put to a vote and carried.*

The Speaker: Are there any other committee reports? We are now under the head of unfinished business. Mr. Secretary.

Secretary Parsons: I don't know of anything.

The Speaker: New business.

Secretary Parsons: Mr. Speaker, we are in receipt of a communication concerning proposed legislation which has been introduced as House File 6024 in the Rivers and

Harbors Committee concerning stream pollution. This is really a sanitary measure. The report is that on April 10, House File 6024 was reported out favorably by the Rivers and Harbors Committee. Also, House action is expected early in May. Now is the time for all Waltonians and all other decent citizens to let their own Congressmen know they want House Bill 6024 to become a law.

The implications of the proposed law are merely those to prevent pollution by factories, sludge, sewage, and so forth to navigable waters, because of its effect on fish and migratory birds. It is a sanitary measure and also has some implications as to sanitation from the human standpoint. It sounds as if it were a common sense bill. This is being backed largely by the Izaak Walton League, and they asked that the medical profession give its support to this particular bill and let our Congressmen know that this House Bill 6024 is desirable from our standpoint.

Mr. Speaker: I move that the House of Delegates approve of the contemplated action of House Bill 6024.

*The motion was seconded, put to a vote and carried.*

The Speaker: The next order of business is the announcement of committees. I will ask the Secretary to read my proposed committee members.

Secretary Parsons: These are the appointments as made by the incoming President.

STANDING COMMITTEES OF THE HOUSE OF

DELEGATES—1946-1947

CONSTITUTION AND BY-LAWS

J. H. Henkin.....Sioux City

J. D. Conner.....Nevada

D. F. Rodawig.....Spirit Lake

FINANCE

E. C. McClure.....Bussey

A. S. Bowers.....Orient

A. J. Gantz.....Greenfield

LEGISLATION

J. W. Billingsley.....Newton

L. A. Coffin.....Farmington

C. W. Losh.....Des Moines

R. L. Parker.....Des Moines

J. C. Parsons.....Des Moines

MEDICAL EDUCATION AND HOSPITALS

G. H. Scanlon.....Iowa City

J. V. Treynor.....Council Bluffs

R. F. Birge.....Des Moines

MEDICAL SERVICE AND PUBLIC RELATIONS

Fred Sternagel.....West Des Moines

M. I. Olsen.....Des Moines

R. D. Bernard.....Clarion

C. T. Maxwell.....Sioux City

R. C. Gutch.....Chariton

M. C. Hennessy.....Council Bluffs

D. C. Conzett.....Dubuque

E. E. Shaw.....Indianola

MEDICOLEGAL

A. L. Jensen.....Council Bluffs

SPECIAL COMMITTEES OF THE HOUSE OF

DELEGATES

BALDRIDGE-BEYE MEMORIAL

F. A. Hennessy.....Calmar

E. D. Warner.....Iowa City

W. M. Fowler.....Iowa City

CANCER

E. D. Plass.....Iowa City

H. W. Morgan.....Mason City

E. G. Zimmerer.....Des Moines

A. W. Erskine.....Cedar Rapids

A. C. Starry.....Sioux City

D. F. Ward.....Dubuque

V. W. Petersen.....Clinton

F. H. Beaumont.....Council Bluffs

J. R. Rankin.....Keokuk

W. J. Balzer.....Davenport

J. C. Hill.....Newton

FRACTURE

A. F. O'Donoghue.....Sioux City

C. O. Adams.....Mason City

F. L. Knowles.....Fort Dodge

F. G. Ober.....Burlington

F. R. Peterson.....Iowa City

L. M. Overton.....Des Moines

D. N. Gibson.....Des Moines

HISTORICAL

W. L. Bierring.....Des Moines

H. G. Langworthy.....Dubuque

C. A. Henry.....Farson

C. L. Jones.....Gilmore City

L. C. Kern.....Waverly

INDUSTRIAL HEALTH

J. E. Reeder.....Sioux City

C. B. Meffert.....Cedar Rapids

C. N. Cooper.....Waterloo

D. S. Egbert.....Fort Dodge

G. M. Crabb.....Mason City

## MATERNAL AND CHILD HEALTH

H. E. Farnsworth.....	Storm Lake
R. H. McBride.....	Sioux City
L. F. Hill.....	Des Moines
C. P. Phillips.....	Muscatine
H. A. Weis.....	Davenport
J. F. Gerken.....	Waterloo
R. M. Collins.....	Council Bluffs

## SCIENTIFIC EXHIBITS

E. A. Fullgrabe.....	Des Moines
F. C. Coleman.....	Des Moines
A. D. Woods.....	State Center
J. S. Weingart.....	Des Moines

## SPEAKERS BUREAU

G. E. Mountain.....	Des Moines
A. A. Schultz.....	Fort Dodge
R. N. Larimer.....	Sioux City
B. F. Wolverton.....	Cedar Rapids
L. C. Hickerson.....	Brooklyn

## TUBERCULOSIS

J. C. Painter.....	Dubuque
J. C. Parsons.....	Des Moines
R. J. Harrington.....	Sioux City
L. J. Galinsky.....	Des Moines
R. E. Smiley.....	Mason City
D. R. Webb.....	Cedar Rapids
W. M. Spear.....	Oakdale

## CHAIRMAN, MEDICAL SECTION

Herbert W. Rathe.....	Waverly
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## CHAIRMAN, SURGICAL SECTION

Joseph B. Priestly.....	Des Moines
-------------------------	------------

## CHAIRMAN, EYE, EAR, NOSE AND THROAT SECTION

James E. Reeder, Jr.....	Sioux City
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The Speaker: May I have a motion that the committee members as recommended by the incoming President be approved?

Dr. Woods: I so move, Mr. Speaker.

*The motion was seconded, put to a vote and carried.*

The Speaker: At this time we will consider the place of meeting for next year.

Dr. Evans: I move, Mr. Speaker, we meet in Des Moines.

Dr. Gardner: I second the motion.

*The motion was put to a vote and carried.*

The Speaker: Is there any other business that should come before the House? Gentlemen, I wish to thank you for the support you have given me in my very poor presiding as Speaker of the House. I have done the best that I could. You have supported me in a fine manner, and I thank you from the bottom of my heart. I now declare the Ninety-Fifth Session of the House of Delegates of the Iowa State Medical Society adjourned sine die.

... The meeting adjourned at nine-thirty o'clock ...



# MEMBERSHIP ROSTER

*of the*

## IOWA STATE MEDICAL SOCIETY

1946



Members in Good Standing

as of

June 22, 1946

- Aagesen, Carl A., Dows  
 Abbott, Walter D., Des Moines  
 Abegg, Henry H., Dougherty  
 Acher, Albert E., Fort Dodge  
 Acker, Wesley H., Waterloo  
 Ackerman, Emma M., Sioux City  
 Adair, Gael M., Anita  
 Adams, Carroll O., Mason City  
 Adams, Ernest M., Central City (L.M.)  
 Adams, Leon P., Newton  
 Adrian, Frank, Sigourney  
 Ady, Albert E., West Liberty  
 Aeilts, Eerko S., Sibley  
 Agnew, Fred F., Independence  
 Agnew, James W., Iowa City  
 Ahrens, Lewis H., Fontanelle  
 Aid, Francis H., Burlington  
 Albright, George C., Iowa City  
 Alcock, Nathaniel G., Iowa City  
 Alcorn, William L., Washington  
 Alden, Oscar, Red Oak  
 Aldrich, J. Frank, Clarinda  
 Aleshire, Irma, Cedar Rapids  
 Altfine, David C., Muscatine  
 Allen, James H., Iowa City  
 Allen, Roy J., Sumner  
 Alliband, George A., Atlantic  
 Allison, Arthur L., Rodney  
 Allison, Monroe P., Northwood  
 Almer, Lennart E., Moorhead  
 Almqvist, Reuben E., Albert City  
 Ambery, Sebastian, Keokuk  
 Amdor, William F., Glendale, California (L.M.)  
 Amesbury, Harry A., Clinton  
 Amick, Louis B., Sac City  
 Amlie, Paul J., Waverly  
 Andersen, Bruce V., Greene  
 Andersen, Holger M., Strawberry Point  
 Anderson, Edward N., Iowa City  
 Anderson, Edward W., Des Moines  
 Anderson, Frank J., Rolfe  
 Anderson, Glenn J., Winterset  
 Anderson, Harold N., Des Moines  
 Anderson, Harry N., Woodbine  
 Anderson, James D., West Des Moines  
 Anderson, Leo E., Council Bluffs  
 Anderson, N. Boyd, Des Moines  
 Anderson, Robert E., Chariton  
 Anderson, Stanley N., Owawa  
 Andre, Gaylor R., Lisbon  
 Andrew, Earl V., Maquoketa  
 Angell, Charles A., Des Moines  
 Anneberg, Adrian R., Carroll  
 Anneberg, Paul D., Carroll  
 Anrode, Ralph A., Davenport  
 Anspach, Ellen E. F., Mitchellville  
 Anspach, Royal G., Colfax  
 Anspach, Royal S., Mitchellville  
 Anthony, Ernest J., Black Mountain, North Carolina  
 Anthony, Walter E., Ottumwa  
 Arent, Asaph, Humboldt (L.M.)  
 Arent, Asa S., Humboldt  
 Arkin, Archie A., Des Moines  
 Armitage, George I., Murray  
 Armstrong, Frederick C., Cascade  
 Armstrong, Max A., Newell  
 Armstrong, Robert B., Ida Grove  
 Armstrong, William B., Ames  
 \*Arnold, Thomas, Primghar  
 Arthur, William R., Hampton  
 Ash, William E., Council Bluffs  
 Ashby, Atchison A., Sioux City (L.M.)  
 Ashline, George H., Keokuk  
 Asthalter, Robert W., Muscatine  
 Augustine, Grant, Council Bluffs  
 Auner, Jay F., Des Moines  
 Ayers, LeRoy J., Sioux City  
 Bacon, Joshua E., Dubuque  
 Bain, Clarence L., Corning  
 Bairnson, George A., Cedar Falls  
 Baker, Charles J., Fort Dodge  
 Baker, Walter E., Des Moines  
 Baldwin, Leon A., Riverton  
 Balkema, Walter S., Sheldon  
 Baltzell, Winston C., Charles City  
 Balzer, Walter J., Davenport  
 Bannister, Murdoch, Ottumwa (L.M.)  
 Banton, Oscar H., Charles City  
 Barber, Oliver S., Creston  
 Barbour, Howard W., Mason City  
 Barg, Egmont H., Mason City  
 Barner, John L., Athens, Georgia  
 Barnes, Benjamin S., Shenandoah  
 Barnes, Bernard C., Des Moines  
 Barnes, Milford E., Iowa City  
 Barnett, Reu L., Atlantic  
 Barnett, Sylvester W., Cedar Falls  
 Barr, Guy E., Sioux City  
 Barrett, James W., Jr., Independence  
 Barrett, Sterling A., Waterloo  
 Bartels, Robert N., Sioux City  
 Bartlett, George E., New Sharon  
 Barton, Edwin G., Ottumwa  
 Barton, John C., Independence  
 Bartruff, Charles H., Reinbeck  
 Bascom, Lewis A., Nora Springs  
 Basinger, Byron L., Goldfield  
 Bastron, Harold C., Red Oak  
 Bates, Maurice T., Des Moines  
 Bates, William R., Fort Dodge  
 \*Baumgarten, Oscar, Earlville  
 \*Bausch, Richard G., Detroit, Michigan  
 \*Bay, Frank N., Albion  
 Beal, Arline M., Davenport  
 Beam, Watson W., Rolfe (L.M.)  
 Beardsley, David E., Cedar Rapids  
 Beardsley, Ralph W., Livermore  
 Beatty, Alexander S., Creston  
 Beatty, Edmund D., Mallard (L.M.)  
 Beatty, Howard G., Creston  
 Beaumont, Fred H., Council Bluffs  
 Beckman, Peter W., Perry  
 Beddoes, Morris G., Oelwein  
 Beeh, Edward F., Fort Dodge  
 Bees, Louis E., Bennett  
 Behrens, George W., Eldridge  
 Bell, Edward P., Pleasantville  
 Bellinger, Frank E., Council Bluffs  
 Bender, Henry A., Waterloo  
 Bendixen, Frederick C., LeMars  
 Benfer, Merrill M., Davenport  
 Bennett, Andrew W., Iowa City  
 Bennett, Geoffrey W., Oskaloosa  
 Berger, Raymond A., Davenport  
 Bergstrom, Albin C., Missouri Valley  
 Berkstresser, Charles F., Sioux City  
 Bernard, Ransom D., Clarion  
 Berney, Paul W., Cedar Rapids  
 Besser, Edward F., Newton  
 Bessmer, William G., Davenport  
 Best, Gordon N., Council Bluffs  
 Bettler, Philip L., Sioux City  
 Beveridge, Thomas F., Muscatine (L.M.)  
 Beyer, Arthur E., Guttenberg  
 Bezman, Harry S., Traer  
 Bickert, Joseph N., Cedar Rapids  
 Bickley, Donald W., Waterloo  
 Bickley, G. G., Jr., Waterloo  
 Bickley, John W., Los Angeles, California  
 Biebesheimer, George A., Reinbeck  
 Bierring, Walter L., Des Moines (L.M.)  
 Biersborn, Byron M., State Center  
 Bigelow, Charles T., Clinton  
 Bigelow, S. Edward, Fort Madison  
 Billingsley, John W., Newton  
 Binford, William S., Davenport  
 Bird, Raymond G., Clarion  
 Birge, Richard F., Des Moines  
 Birney, Cleanthus E., Estherville  
 Bisgard, Carl V., Harlan  
 Bisgard, James A., Harlan (L.M.)  
 Bishop, James F., Grand Rapids, Michigan  
 Black, Harold C., Des Moines  
 Black, John R., Jefferson  
 Blackburn, Guy R., Fort Madison  
 Blackman, Nathan, St. Louis, Missouri  
 Blackstone, Martin A., Sioux City  
 Blaha, George A., Whitten  
 Blair, Fred L., Jr., Fonda  
 Block, Charles E., Davenport  
 Block, Lawrence A., Davenport  
 Block, Walter M., Cedar Rapids  
 Blome, Arthur L., Ottumwa  
 Blome, Glenn C., Ottumwa  
 Blong, Theodore E., Stacyville  
 Blum, Aloysius A., Wall Lake  
 Blum, Otto S., Waverly  
 Blume, Donald B., Sioux City  
 Blume, Winfred R., Sioux City  
 Bockoven, William A., Cresco  
 Boden, Herbert N., Osceola  
 Boden, Worthey C., Davenport  
 Boe, Henry, Sioux City  
 Boice, Clyde A., Washington  
 \*Boice, Clyde L., Oakland, California  
 Boiler, William F., Iowa City  
 Boland, Francis W., Wichita, Kansas  
 Bollor, Galen C., Calmar  
 Bond, Thomas A., Des Moines  
 Bond, Thomas P., Des Moines (L.M.)  
 Bone, Harold C., Des Moines  
 Bonnell, Frank S., Fairfield  
 Bergen, Donald L., Gowrie  
 Borre, Helge, Red Oak  
 Borts, Irving H., Iowa City  
 Bos, Cornelius N., Oskaloosa  
 Bosch, Calvin C. F., Sibley  
 Bossingham, Otmer N., Clarinda  
 Poston, Burr C., Waterloo  
 Boulware, Lois, Iowa City  
 Bourne, Melvin G., Algona  
 Bovenmyer, DeVoe O., Ottumwa  
 Bowen, Frederick S., Woodburn  
 Bowers, Arthur S., Orient  
 Bowers, Bert A., Sioux City  
 Bowers, Clifford V., Sioux City  
 Bowers, Henry W., Nevada  
 Bowler, Louis L., Marshalltown  
 Bowman, Fred A., Leon (L.M.)  
 Bowser, Will F., Davenport  
 Boyd, Eugene J., Iowa City  
 Boyd, Frank E., Colfax  
 Boyd, Julian D., Iowa City  
 Boyer, Edward H., Mason City  
 Boyer, Howard C., Council Bluffs  
 \*Boyer, Ulysses S., Davenport  
 Bradford, Clyde R., Des Moines  
 Bradley, Carl L., Newhall  
 Braunlich, George, Davenport  
 Brecher, Paul W., Storm Lake  
 \*Brentan, Emanuel, Ottumwa  
 Breerton, Harold L., Emmetsburg  
 Brewster, Calvin O., Britt  
 \*Brewster, Edward S., Boone  
 Bridgeman, Harry L., Knoxville (L.M.)  
 Bries, Frank J., Holy Cross  
 Brink, Raymond J., Ayrshire  
 Brinker, Marion H., Jefferson  
 Brinkhaus, Kenneth M., Iowa City  
 Brinkman, William F., Pocahontas  
 Brisbane, Royal E., Burbank, California (L.M.)  
 Brittell, Chancey L., Chariton  
 Brobyn, Thomas E., Grinnell  
 Brock, Walter R., Sheldon  
 Broderick, Clarence E., Cherokee  
 Brody, Sidney, Ottumwa  
 Broghammer, Benjamin G., Cedar Rapids  
 Brown, Addison W., Des Moines  
 Brown, Arthur C., Council Bluffs  
 Brown, Douglas H., Forest City  
 Brown, Ernest L. W., Iowa Falls  
 Brown, Gates M., Dayton  
 Brown, George B., Clarion  
 Brown, Harold L., Sioux City  
 Brown, Harry W., Des Moines  
 Brown, Ivan E., Forest City  
 Brown, Kenneth R., Leon  
 Brown, Merle J., Davenport  
 Brown, Samuel J., Panora (L.M.)  
 Brown, Wayne B., Mount Pleasant  
 Brown, Willis E., Iowa City  
 Brownstone, Sidney, Clear Lake  
 Brubaker, Carl F., Corydon  
 Bruce, James H., Fort Dodge  
 Bruechert, Henry N., Parkersburg  
 Brumer, Herbert B., Clinton  
 Brummitt, Charles F., Centerville  
 \*Bruner, Julian M., Des Moines  
 Brunk, Amos W., Prescott  
 Brunner, Walter J., Akron  
 Brush, C. Herbert, Shenandoah  
 Buchanan, John J., Milford  
 Buechel, Buell, Corydon  
 Buckley, Charles E., Blockton  
 Buckmaster, Raleigh A., Dunkerton  
 Bullock, Alfred L., Cushing  
 Bullock, Grant D., Cushing  
 Bullock, William E., Lake Park  
 Bunch, Harold McK., Shenandoah  
 \*Bunge, Raymond G., Iowa City  
 Burbank, Dean S., Pleasantville  
 Burbank, Frank E., Pleasantville (L.M.)  
 Burbridge, Glen E., Nebraska City, Nebraska  
 Burch, Earl S., Dayton  
 Burcham, Thomas A., Des Moines  
 \*Burdick, Francis D., Shenandoah  
 Buresh, Abner, Lime Springs  
 Burgeson, Floyd M., Des Moines  
 Burgess, Arthur W., Iowa Falls  
 Burke, Thomas A., Mason City  
 Burke, Thomas J., Davenport  
 \*Burleson, Marvin W., Fort Dodge  
 Burnett, Francis K., Cheyenne, Wyoming  
 Burns, Harry, Des Moines  
 Burnside, Raymond A., Des Moines  
 Burroughs, Hubert H., Sioux City  
 Bursheim, Peder J., Des Moines  
 Bush, Earl B., Ames  
 Bushmer, Alexander, Orange City  
 Bushnell, John W., Sioux City  
 Butler, Margaret K., Fort Dodge  
 Butterfield, Edwin J., Dallas Center (L.M.)  
 \*Butterfield, Elwyn T., Dallas Center  
 Butterfield, Rosabell A., Indianola (L.M.)  
 Butts, John H., Waterloo  
 Butzke, Ernest J., Hampton, Virginia  
 Buxton, Otho C., Jr., Webster City  
 Buzard, Irenarch S., Jefferson (L.M.)  
 Byers, Albert G., Coggon  
 Byers, Bert H., Manchester  
 Byrnes, Clemmet W., Dunlap  
 Cahill, John A., Dubuque  
 Cahn, Philipp, Oakdale  
 Calbreath, Lloyd B., Humeston  
 Caldwell, John W., Des Moines  
 Campbell, Benjamin F., Burlington



- Campbell, Nathan, Yarmouth  
 Campbell, Thomas R., Sioux Rapids  
 Campbell, Walter V., Oskaloosa  
 Canfield, Herbert W., Baxter (L.M.)  
 Cantrell, Carmi, Lone Tree  
 Cantwell, John D., Davenport  
 ★ Carey, Edward T., Jr., Davenport  
 Carey, Michael J., Council Bluffs  
 Carlile, Amos W., Manning  
 Carlson, Elmer H., Muscatine  
 Carlson, Frank G., Mason City (L.M.)  
 Carpenter, Fred E., Newton  
 Carpenter, Ralph C., Marshalltown  
 Carr, Leslie L., West Union  
 Carrigg, Lawrence G., Cedar Rapids  
 Carrington, Elsie R., Clinton  
 Carryer, Carl H., Des Moines  
 Carson, Andros, Des Moines (L.M.)  
 Carstensen, Albert B., Linn Grove  
 ★ Cartwright, Forrest P., Grand Junction  
 Carver, David C., Rockwell City  
 Carver, Harry E., Earlham  
 Carver, William F., Fort Dodge  
 Cary, Walter, Dubuque  
 Cash, William H., Lenox  
 Castell, John W., Osceola  
 Castles, William A., Dallas Center  
 Catalano, William E., Muscatine  
 Catterson, Leroy F., Oskaloosa  
 Coughlan, Gerald V., Council Bluffs  
 Cauley, Francis P., Anthon  
 Caulfield, John D., New Hampton  
 Cavanaugh, John W., Fort Dodge  
 Chadbourne, Theodore L., Vinton (L.M.)  
 Chain, Leo W., Dedham  
 Challed, Don S., Cedar Rapids  
 Chambers, Charles L., Des Moines  
 Chambers, James W., Des Moines  
 Chapler, Keith M., Dexter  
 Chapman, Frederick J., Keokuk  
 Chapman, Robert M., Cedar Rapids  
 Charlton, Thomas B., Clinton  
 Chase, Sumner B., Fort Dodge  
 Chase, Walter E., Rippey  
 Chase, William B., Jr., Des Moines  
 Chase, William B., Sr., Des Moines  
 Chenoweth, Charles E., Mason City  
 Chesnut, Paul F., Winterset  
 Chester, Walter S., Albia  
 Childs, Hal A., Creston (L.M.)  
 Chilson, Alvin H., Plymouth  
 Chisholm, Roderick B., Griswold  
 Chittum, John H., Wapello  
 Chittum, Josiah M., North Liberty  
 Choate, Cora W., Marshalltown  
 Christensen, Emil M., Garner  
 Christensen, Eunice M., Iowa City  
 Christensen, Everett D., Iowa City  
 Christensen, John R., Eagle Grove  
 Christiansen, Charles C., Grand Mound  
 Christiansen, John E., Durant  
 Clapsaddle, Dean W., Clear Lake  
 Clapsaddle, John G., Burt  
 Clark, Frank H., Clarinda  
 Clark, George H., Oskaloosa  
 Clark, Howard F., Stuart  
 Clark, James P., Estherville  
 ★ Clark, Oliver T., Keokuk  
 Clark, Orson W., Ogden  
 Clark, Richardson E., Manchester  
 Clark, Thomas D., Victor  
 Clary, William H., Prescott (L.M.)  
 Clasen, Henry W., Cedar Falls  
 Cleary, Hugh G., Fort Madison  
 Closson, Charles L., Walker  
 Cmeyla, Patrick M., Sioux City  
 ★ Cobb, Elliott A., Iowa City  
 Cobb, Elliott C., Sioux City  
 Coburn, Frank E., Iowa City  
 Cochran, J. Lawrence, Carroll  
 Coddington, James H., Chicago, Illinois  
 Cody, William E., Sioux City  
 Coffin, Lonnie A., Farmington  
 ★ Cogan, Samuel, Mount Pleasant  
 Cogley, John P., Council Bluffs  
 Cole, Elmer J., Woodbine (L.M.)  
 Cole, Fern N., Iowa Falls  
 Cole, Harold P., Thurman  
 Cole, Julia, Ames  
 Coleman, Francis C., Des Moines  
 Colletter, Charles C., Spencer  
 Collins, Harry A., Des Moines  
 Collins, Loren E., Estherville  
 Collins, Robert M., Council Bluffs  
 Conaway, Aaron C., Marshalltown  
 Conney, Roy M., Sergeant Bluff  
 Connell, John, Des Moines  
 Connelly, Edgar J., Dubuque  
 ★ Conner, Frank H., Nevada  
 Conner, John D., Nevada  
 Conzett, Donald C., Dubuque  
 Cook, Clarence P., Des Moines  
 Cook, Kenneth G., Fairfield  
 Cook, Stuart H., Rock Rapids  
 Cooper, Clark N., Waterloo  
 Cooper, Gladys A., Red Oak  
 Cooper, James S., Burlington  
 Cooper, J. Clark, Villisca  
 Cooper, Raymond E., Keokuk  
 Cooper, Thaddeus C., Ogden  
 Cooper, Wayne K., Cedar Rapids  
 Corbin, Sylvanus W., Corydon  
 Cords, Charles H., Rudd  
 Corn, Henry H., St. Louis, Missouri  
 Cornell, Corwin S., Knoxville  
 Cornell, Dale D., Iowa City  
 Coughlan, Charles H., Fort Dodge  
 Coughlan, Daniel W., Des Moines  
 Courter, Willard O., Bend, Oregon  
 ★ Cowan, John A., Sioux City  
 Cowgill, Frank W., Nevada  
 Cox, Elmer L., Moulton  
 Crabb, George M., Mason City  
 Craig, James A., Keosauqua  
 Crain, Lewis F., Deep River (L.M.)  
 Crain, Mattie M., Deep River (L.M.)  
 Crane, Wendell P., Holstein  
 Crawford, Jennings, Cedar Rapids  
 Crawford, Robert H., Burlington  
 Cressler, Frank E., Churdan  
 Cretzmeyer, Charles H., Algona  
 Cretzmeyer, Francis X., Emmetsburg  
 Crew, Arthur E., Marion  
 Crew, Philip I., Marion  
 Cronk, Charles H., Bloomfield (L.M.)  
 Cross, Donald L., Coon Rapids  
 Crow, George B., Burlington  
 Crow, Ira N., Fairfield  
 ★ Crowder, Roy E., Sioux City  
 Crowley, Daniel F., Des Moines  
 Crum, John R., Stanwood  
 Crumpton, Robert C., Webster City  
 Cruzen, John L., Barnes City  
 Culbertson, Robert A., Des Moines  
 Cullen, Stuart C., Iowa City  
 Cullison, Robert M., Fort Howard, Maryland  
 Cunningham, Glenn D., Davenport  
 ★ Cunningham, John C., Dubuque  
 Cunningham, Melvin B., Norwalk  
 Curtis, Dean, Chariton  
 Cusick, George W., Davenport  
 Cutler, Roy H., Little Sioux  
 Dahl, Harry W., Des Moines  
 Dahlbo, John E., Sutherland  
 Dahlquist, Ralph M., Decorah  
 Dalbey, Glenn M., Traer  
 Danley, Royal C., Hamburg  
 Darrow, Clarence A., Dubuque  
 Daut, Walter W., Muscatine  
 Davidson, Thorald E., Mason City  
 Davis, Arthur E., Seymour  
 Davis, Charles M., Centerville  
 Dawson, Emerson B., Fort Dodge  
 Dawson, Leon E., Des Moines  
 Day, Charles S., Cedar Rapids  
 Day, Philip M., Oskaloosa  
 Day, William E., Clarksville  
 Dean, Abbott M., Council Bluffs  
 Dean, Frank W., Council Bluffs (L.M.)  
 Dean, Ray H., Washington (L.M.)  
 Dean, William F., Osceola  
 DeCicco, Ralph, Greenfield  
 Decker, Charles E., Davenport  
 Decker, Henry G., Des Moines  
 Decker, Jay C., Sioux City  
 Deering, Albert B., Boone  
 Deering, John S., Onawa  
 DeGowin, Elmer L., Iowa City  
 Demaree, Chester, Lacona  
 Denney, Benjamin F., Britt  
 Dennison, John C., Bellevue (L.M.)  
 DeShaw, Earl H., Monticello  
 Des Marias, Varina, Grundy Center  
 Devereux, Richard L., Sioux City  
 Dewees, Frank L., Keokuk  
 Dewey, Jay R., Schaller  
 DeWitt, Charles H., Jr., Macedonia  
 DeWitt, Franklin T., Nemaha (L.M.)  
 DeYarman, Kyle T., Morning Sun  
 DeYoung, Ward A., Glenwood  
 Dickey, Claude G., Des Moines  
 Diddy, Keith W., Perry  
 Dierker, Bernard J., Fort Madison  
 Dierker, Frank H., Fort Madison  
 Dietrich, Julius P., Davenport  
 Dimsdale, Lewis J., Sioux City  
 Dingman, Marshal E., Urbana  
 Ditto, Boyd L., Burlington  
 Dixon, George L., Tucson, Arizona (L.M.)  
 Doane, Grace O., Des Moines  
 Dobias, Stephen G., Chelsea  
 Dobsen, Richard A., Sioux City  
 Doering, Valentine T., Fort Madison  
 Dolan, Henry F., Anamosa  
 Doles, James W., Knoxville  
 Dolmage, George F., Buffalo Center  
 Donahue, James C., Centerville  
 Donlan, Eugene V., Clinton  
 Donnell, John W., Hudson  
 Donohoe, Anthony P., Davenport  
 Donohue, Edmund S., Sioux City  
 Donovan, William H., Iowa City  
 Doolen, Glen W., Davenport  
 Doornink, William, Orange City  
 Dorney, Ralph A., Iowa City  
 Dorsey, Thomas J., Fort Dodge  
 Doss, W. Norman, Leon  
 Dowling, C. Dean, Waterloo  
 Down, Howard L., Sioux City  
 Downing, James A., Des Moines  
 Downing, Leroy M., Cedar Rapids  
 Downing, Wendell L., LeMars  
 Downs, Vernon S., Ottumwa  
 Doyle, Joseph L., Sigourney  
 Dressler, John B., Ida Grove  
 Drew, Edward J., Iowa City  
 Driver, Richard W., Waterloo  
 ★ Droz, A. Keith, Washington  
 Dulin, Evelyn H., Iowa City  
 Dulin, John A., Sigourney  
 Dulin, John W., Iowa City  
 Dulin, Tarana J. G., Sigourney  
 Duling, Raymond J., Sioux City  
 Dulmes, Abraham H., Klemme  
 Dunkel, George K., Fairfield  
 Dunkelberg, Elmer I., Waterloo  
 Dunlap, Wallace A., Des Moines  
 Dunn, Francis C., Chicago, Illinois  
 Dunn, James, Davenport  
 Durfee, Max L., Cedar Falls  
 Duschicker, Stanley W., Des Moines  
 Dushkin, Milton A., Des Moines  
 Dutton, Dean A., Van Horne  
 Dvorak, Joseph E., Sioux City  
 ★ Dwankowski, Carl, Mount Pleasant  
 Dwyer, Bernard B., Preston  
 Dwyer, Robert E., Clinton  
 Dyson, James E., Des Moines  
 Earl, Warren Z., Sioux City  
 Ebersole, Francis F., Mount Vernon  
 Edington, Frank D., Spencer  
 Edmonds, Charles W., Sioux City  
 Edwards, Charles V., Council Bluffs  
 Edwards, James F., Ames  
 Edwards, Ralph R., Centerville  
 Egan, Thomas J., Bancroft  
 Egbert, Daniel S., Fort Dodge  
 Eggermayer, George W., Elliott  
 Eggleston, Alfred A., Burlington  
 Egloff, William C., Mason City  
 Eiel, John O., Osage  
 Eiel, Merrill O., Osage  
 Elliott, Olin A., Des Moines  
 Elliott, Vance J., Knoxville  
 Ellis, Coburn H., Webster City  
 Ellis, Howard G., Des Moines  
 Ellison, George M., Clinton  
 Ellyson, Charles W., Waterloo  
 Ellyson, Craig D., Waterloo  
 Elsworth, John N., Harlan  
 Elvidge, George, Perry  
 Ely, Francis A., Des Moines  
 Emerson, Edward L., Muscatine  
 Ennis, Harry H., Decorah  
 Ensley, Bruce, Shell Rock  
 Entringer, Albert J., Dubuque  
 Entz, F. Harold, Waterloo  
 Epley, Verne C., Prairie du Chien, Wisconsin  
 Ergenbright, Willard V., Iowa City  
 Eriesson, Martin G., Cedar Falls  
 Ernst, Floyd W., New Albin  
 Erskine, Arthur W., Cedar Rapids  
 ★ Ervin, Lindsay J., Des Moines  
 Evans, Harold J., Davenport  
 Evans, John G., New Hartford (L.M.)  
 Evans, William I., Sac City  
 Everall, Bruce B., Monona  
 Eversmeyer, Benjamin E., Muscatine  
 Faber, Luke A., Dubuque  
 Fail, Charles S., Jr., Adel  
 Fallows, Howard D., Mason City (L.M.)  
 Farlow, Charles T., Farnhamville  
 Farnham, Alfred J., Traer  
 Farnsworth, Harold E., Storm Lake  
 Farnum, Earl P., Sibley  
 Faust, John H., Manson  
 Fee, Charles H., Denison  
 Fee, Knight E., Toledo  
 Feightner, Robert L., Fort Madison  
 Feller, Alto E., Ft. Bragg, North Carolina  
 Fellows, Joseph G., Ames  
 Fellows, Liberty E., Newton  
 Felter, Allan G., Van Meter  
 Fenlon, Leslie K., Clinton  
 Fenton, Charles D., Bloomfield  
 Fenton, Robert L., Centerville  
 Field, George A., Des Moines  
 Field, Grace E. W., Denver, Colorado  
 Fields, Robert B., LaPorte City  
 Fieseler, Walter R., Fort Dodge

- Files, Edward H., Cedar Rapids  
 Fillenwarth, Floyd H., Charles City  
 Finch, George H., Des Moines  
 Findley, William J. K., Storm Lake (L.M.)  
 Fisch, Roman J., LeMars  
 Fisk, Charlotte, Des Moines  
 Fitzgerald, Joseph D., Sloan  
 Fitzpatrick, Dennis F., Iowa City  
 ★Fitzpatrick, Matthew R., Mason City  
 Flancher, Leon H., Des Moines  
 Flater, Norman C., Floyd  
 ★Fleck, Warren L., Des Moines  
 Fleischman, Abraham G., Des Moines  
 Flickinger, Roger R., Mason City  
 Flocks, Rubin H., Iowa City  
 Floersch, Eugene B., Council Bluffs  
 Floyd, Mark L., Iowa City  
 Flynn, Charles H., Clarinda  
 Flynn, James R., Cedar Rapids  
 Foley, Fred C., Newell  
 Foley, Walter E., Davenport  
 Foltz, Eloise G., Denver, Colorado  
 Fordyce, Frank W., Des Moines  
 Foss, Robert H., Clinton  
 Foster, Jess W., Ankeny  
 Foster, Morgan J., Cedar Rapids  
 Foster, Samuel T., Adel  
 Foster, Warren H., Clinton  
 Foster, Wayne J., Cedar Rapids  
 Foulk, Frank E., Des Moines  
 Fourt, Arthur S., Iowa City  
 Fowler, Charles C., Lovilia  
 Fowler, Willis M., Iowa City  
 Fox, Charles L., Pella (L.M.)  
 Fox, Ray A., Charles City  
 Franchere, Chetwynd M., Mason City  
 Frank, Louis J., Sioux City  
 Frank, Owen L., Maquoketa  
 Franklin, George W., Jefferson  
 Frasco, Peter P., Ruthven  
 Fraser, James B., Des Moines  
 Fraser, John H., Monticello  
 Frech, Raymond F., Newton  
 Frederickson, Adolph R., Lansing  
 Freligh, Clarence N., Waucoma  
 French, Royal F., Marshalltown  
 French, Valiant D., Glendale, California  
 ★Frey, Harry, Fairfield  
 Fritchen, Arthur F., Decorah  
 Fritz, Lafe H., Dubuque  
 Fry, Gerald A., Vinton  
 Fry, John L., Kalona  
 Fuerste, Frederick, Dubuque  
 ★Fuller, James M., Keokuk (L.M.)  
 Fullerton, Oscar L., Redding (L.M.)  
 Fullgrave, Emil A., Des Moines  
 Furgerson, Lee B., Waterloo  
 Gaard, Rasmus R., Radcliffe  
 Galinsky, Leon J., Des Moines  
 Gallagher John P., Oelwein  
 Galloway, Milton B., Webster City  
 Galman, James J., Hospers  
 Galvin, Robert J., Oelwein  
 Gamble, Robert A., Madrid  
 Gamet, Elmo E., Lamoni  
 Gano, James O., Ogden  
 Gantz, Albert J., Greenfield  
 Ganzhorn, Harold L., Mapleton  
 Gardner, Harold O., Waterloo  
 Gardner, John R., Lisbon  
 Gardner, Paul E., New Hampton  
 Garlinghouse, Robert O., Lincoln, Nebraska  
 Garside, Arthur A., Davenport  
 Gasson, James H., Bedford  
 Gauger, John W., Early  
 Gaukel, Leo A., Onawa  
 Gaumer, James S., Fairfield  
 Gearhart, George W., Springville  
 Gearhart, Merriam, Springville  
 Geeseka, Otto A., Mount Pleasant (L.M.)  
 ★Geiger, Ulysses S., North English  
 Gelfand, Ben B., Sioux City  
 Gelfand, Della G., Sioux City  
 George, Everett M., Des Moines  
 ★George, Louis A., Cherokee  
 Gerard, Russell S., Waterloo  
 Gerken, J. Fred, Waterloo  
 Gerney, Merrit N., Waverly  
 Gerstman, Herbert, Marion  
 Gessner, Frederick W., Dysart  
 Getty, Everett B., Primghar  
 Gibbon, William H., Sioux City  
 Gibbs, George M., Burlington  
 Gibson, Chelsea D., Sac City  
 Gibson, Douglas N., Des Moines  
 Gibson, Paul E., Des Moines  
 Gibson, Preston E., Davenport  
 Giegerich, Walter F., Atlantic  
 Giles, Francis E., Cresco  
 Giles, George C., Oakland (L.M.)  
 Gilfillan, Bruce L., Keokuk  
 Gilfillan, Clarence D. N., Bloomfield  
 Gilfillan, George W., Bloomfield  
 Gilfillan, Homer J., Bloomfield  
 Gillett, Francis A., Oskaloosa  
 ★Gillett, Robert M., Oskaloosa  
 Gillies, Carl L., Iowa City  
 Gillmor, Benjamin F., Red Oak  
 Gilpin, Burl B., Vinton  
 Gingles, Earl E., Sioux City  
 Gittins, Thomas R., Sioux City  
 Gittler, Ludwig, Fairfield  
 Givens, Hezekiah F., West Bend  
 Glascock, Thomas J., Hwarden  
 ★Glesne, Orvin G., Monona  
 Glesne, Otto N., Fort Dodge  
 ★Gleysteen, Derk J., Alton  
 ★Gleysteen, Rodney R., Alton  
 Gloeckler, Bernhard B., Mount Pleasant  
 Glomset, Daniel A., Des Moines  
 Glomset, Daniel J., Des Moines  
 Glotfelty, James S., Sheridan, Wyoming  
 Goad, Robley R., Muscatine  
 Goddard, Chester R., Guttenberg  
 Goen, Edwin J., Charles City  
 Goenne, William C., Davenport  
 Goggin, John G., Ossian  
 Goldberg, Louie, Des Moines  
 Goltry, Charles F., Russell  
 Goodenow, Sidney B., Colo  
 Gordon, Arnold M., Des Moines  
 Gorrell, Ralph L., Clarion  
 Gottlieb, Jacques S., Iowa City  
 Gottsch, Erwin J., Shenandoah  
 Gould, George R., Conrad (L.M.)  
 Gould, Isaac L., Ottumwa  
 Gower, Walter E., Pocahontas  
 ★Grabner, Harold E., Fairfield  
 Graeber, Frederick O., Des Moines  
 Graening, Charles H., Waverly (L.M.)  
 Graham, James W., Sioux City  
 Gran, Albert G., Storm Lake  
 Grandinetti, Arthur F., Oelwein  
 Grant, John G., Ames  
 Grau, Amandus H., Denison  
 Graves, Max D., Taunton, Massachusetts  
 Gray, Henry A., Keokuk  
 ★Gray, Howard D., Des Moines  
 ★Gray, John F., Jr., Melcher  
 Gray, John F., Melcher  
 Gray, Ralph E., Eldora  
 Greek, Louis M., Detroit, Michigan  
 Greenblatt, Jerald, Cedar Rapids  
 Greenlee, Max R., Oskaloosa  
 Greteman, Theodore J., Van Nuys, California  
 Griffin, Clark C., Jr., Vinton (L.M.)  
 Griffin, Frank L., Baldwin  
 Griffin, John M., Des Moines  
 Griffin, Sarah M. F., Manson  
 Griffith, William O., Council Bluffs  
 Grimm, Peter G., Spirit Lake  
 Groman, August, Odebolt (L.M.)  
 Groben, Elmer S., Columbus Junction  
 Gross, Erwin G., Iowa City  
 Grossman, Milton D., Sioux City  
 Grossman, Raymond S., Marshalltown  
 Grossmann, Edward B., Orange City  
 Grothaus, Dell L., Delta  
 Grubb, Merrill W., Galva  
 Gruenwald, Siegfried, Independence  
 Gunn, Ross E., Boone  
 Gurau, Henry H., Des Moines  
 Gutch, Roy C., Chariton  
 Gutch, Thomas E., Albia  
 Hage, Martin M., Lake Mills  
 Hagen, Edward F., Decorah  
 Haines, Diedrich J., Des Moines  
 Haisch, Lily K., Dubuque  
 Hale, Albert E., Mason City  
 Hall, Bonnybel A., Maynard  
 Hall, Cluley C., Maynard  
 Hall, Forest F., Webster City  
 Halloran, William H., Audubon  
 Halpin, Lawrence J., Cedar Rapids  
 Hamilton, Benjamin C., Jefferson (L.M.)  
 Hamilton, Benjamin C., Jr., Jefferson  
 Hamilton, Cecil V., Garner  
 Hamilton, Harriett S., Council Bluffs  
 Hamilton, Henry H., Cedar Rapids  
 Hamstreet, Wilbur F., Titonka  
 Hanchett, W. McMicken, Council Bluffs  
 Hands, Sidney G., Davenport  
 Hankey, Daniel C., Council Bluffs  
 Hansell, William W., Des Moines  
 Hansen, Fred A., Red Oak  
 Hansen, Niels M., Des Moines  
 Hansen, Robert F., Belmond  
 Hansen, Robert R., Marshalltown  
 Hansen, Russell R., Storm Lake  
 Hanson, Frank H., Magnolia  
 Hanson, Laurence C., Jefferson  
 Hardin, John F., Bedford  
 Hardin, Robert C., Iowa City  
 Hardwig, Oswald C., Waverly  
 Harken, Conreid R., Osceola  
 Harkness, Gordon F., Davenport  
 Harman, Clarence, Emerson  
 Harman, Dean W., Glenwood  
 Harms, George E., Norway  
 Harnagel, Edward J., Des Moines  
 ★Harness, William M., Iowa City  
 Harp, John F., Newton (L.M.)  
 Harper, Edna K. S., Greenfield  
 Harper, William H., Keokuk  
 Harrington, Arlan F., Cedar Rapids  
 Harrington, Raymond J., Sioux City  
 Harris, Clinton E., Grinnell  
 Harris, D. Dale, Marshalltown  
 Harris, Donald M., Sioux City  
 Harris, Grove W., Marshalltown  
 Harris, Herbert H., Battle Creek  
 Harris, Ray R., Dubuque  
 ★Harris, Robert H., Mason City  
 ★Hart, William E., Odebolt (L.M.)  
 Hartley, Byron D., Mount Pleasant  
 Hartman, Frank T., Waterloo (L.M.)  
 Hartman, Howard J., Waterloo  
 ★Hartung, Walter, Iowa City  
 Hastings, John C., Elma  
 Havlik, Aloysius J., Tama  
 Hawkins, Emmet L., Council Bluffs  
 Hawley, Olin B., Corning  
 Hayek, John M., Des Moines  
 Hayne, Willard W., Paulina  
 Hazard, Charles M., Arlington  
 Hazlet, Kenneth K., Dubuque  
 Heady, Conda C. C., Bloomfield (L.M.)  
 Heald, Clarence L., Sigourney  
 Healy, Maurice A., Boone  
 Healy, Maurice J., Boone  
 Heathman, Frank E., Pocahontas  
 Hebert, William S., Iowa City  
 Hecker, John T., Cedar Rapids  
 ★Hedgecock, Lewis E., Hampton  
 Heetland, Louis H., Sibley (L.M.)  
 Heffernan, Chauncey E., Sioux City  
 Hegg, Lester R., Rock Valley  
 Heise, Carl A., Missouri Valley  
 Heise, John A., Jr., Jewell  
 Heles, John B., Dubuque  
 Henderson, Lauren J., Cedar Falls  
 Henderson, Walker B., Oelwein  
 Hendrickson, Alvin H., Sioux City  
 Henely, Edmund, Nora Springs  
 Henkin, John H., Sioux City  
 Hennes, Raphael J., Oxford  
 Hennessy, Felix A., Calmar  
 Hennessy, J. Donald, Council Bluffs  
 ★Hennessy, M. Charles, Council Bluffs  
 Henning, Garold G., San Antonio, Texas  
 Henry, Clyde A., Farson  
 Henry, Hiram B., Des Moines  
 Herman, John C., Boone  
 Hermesen, Paul J., Bronson  
 Herny, Peter M., Prairie City  
 Herrick, Thomas G., Gilmore City  
 Herrmann, Christian H., Jr., Amana  
 ★Herron, David A., Iowa Falls  
 Hersch, Thomas F., Cedar Rapids  
 Hershey, Nelson L., Independence  
 Hess, Ardo M., West Union  
 Hess, John, Jr., Des Moines  
 Hess, William C., Cresco  
 Heusinkveld, Henry J., Jr., Clinton  
 Hickenlooper, Carl B., Winterset  
 Hickerson, Luther C., Brooklyn  
 Hickman, Charles S., Centerville  
 Hicks, Wayland K., Sioux City  
 Hight, William B., Des Moines  
 Hill, Christine E., Council Bluffs  
 Hill, Don E., Clinton  
 Hill, James C., Newton  
 Hill, James W., Mount Ayr  
 Hill, Kathryn D., West Point, Virginia  
 Hill, Julia F., Pittsburgh, Pennsylvania  
 Hill, Lee F., Des Moines  
 Hills, Henry M., Lamoni (L.M.)  
 Hills, Robert A., Russell  
 ★Hinrichs, Robert G., Manson  
 Hobart, Francis W., Lake City  
 Hoeven, Edward B., Ottumwa  
 Hoffman, George R., Iowa City  
 Hoffman, Paul M., Tipton  
 Hoffmann, Alfred A., Waterloo  
 Hofmann, William P., Davenport  
 Hogle, William M., Keokuk  
 Hollis, Edward L., Marengo  
 Holman, Henry D., Mason City  
 Holmes, Wilson W., Keokuk  
 Holtey, Joseph W., Ossian  
 Hommel, Placido R. V., Elkader  
 Honke, Edward M., Sioux City  
 Hooper, Lester E., Indianola  
 Hopkins, David H., Glidden  
 Hornaday, William R., Des Moines  
 Horton, Vincent J., Calmar  
 Hosford, Horace F., Burlington  
 Hospodarsky, Leonard J., Ridgeway  
 Hotz, Edward J., Strawberry Point  
 Houghton, Earl J., Bettendorf



- Houlahan, Jay E., Mason City  
 Houlihan, Francis W., Ackley  
 Houlihan, Thomas J., Ida Grove (L.M.)  
 Houser, Blanche W., Cedar Rapids  
 Houser, Cass T., Cedar Rapids  
 Housholder, Harold A., Winthrop  
 Houston, Bush, Nevada  
 Howar, Bruce F., Webster City  
 Howard, Lloyd G., Council Bluffs  
 Howard, William H., Oelwein  
 Howell, Elias B., Ottumwa
- ★Howell, Homer P., Ottumwa  
 Howland, Charles F., Des Moines  
 Hoyt, Charles N., Port Huron, Michigan  
 Hubbard, Frank A., Columbus Junction (L.M.)
- ★Huber, Robert H., Charles City  
 Hudak, Joseph W., Garnaville  
 Hudson, Jessie B., Hampton  
 Huffman, William C., Iowa City  
 Hughes, Robert O., Ottumwa  
 Hull, Henry C., Washington (L.M.)  
 Hulse, Charles A., Iowa City  
 Huntley, Charles C., Avoca  
 Hurevitz, Hyman M., Davenport  
 Huston, Daniel F., Burlington  
 Huston, Herbert M., Ruthven (L.M.)  
 Huston, Marshall D., Cedar Falls  
 Huston, Paul E., Iowa City  
 Huston, Samuel W., Mount Pleasant  
 Hyatt, Charles N., Albion (L.M.)  
 Hyatt, Charles N., Jr., Humeston  
 Ihle, Charles W., Cleghorn  
 Ihle, Charles W., Jr., Cherokee  
 Ingham, Paul G., Mapleton  
 Ingraham, David R., Sewal  
 Irish, Thomas J., Forest City  
 Irving, Noble W., Des Moines  
 Irwin, Ralph L., Iowa City  
 Isenberg, Bertice A., Lehighville  
 Jackson, James M., Jefferson  
 Jackson, James S., Mount Pleasant  
 Jacobs, Carl A., Iowa City  
 Jacoby, James A., Burlington  
 Jaenicke, Kurt, Clinton  
 James, Audra D., Des Moines  
 James, David W., Des Moines  
 James, Lora D., Fairfield  
 James, Peter E., Elk Horn
- ★James, Roger A., Allison  
 Jameson, Robert E., Davenport  
 Janse, Phillip V., Algona  
 Jansonius, John W., Eldora  
 January, Lewis E., Iowa City  
 Jardine, George A., New Virginia  
 Jarvis, Fred J., Oskaloosa  
 Jarvis, Harry D., Chariton  
 Jeans, Philip C., Iowa City  
 Jeffries, Roy R., Waukon  
 Jenk, Lloyd F., Madison, Wisconsin  
 Jenkins, George A., Albion  
 Jenkins, George D., Burlington  
 Jenkinson, Harry R., Iowa City  
 Jenks, Alonzo L., Jr., Des Moines  
 Jensen, Arnold L., Council Bluffs  
 Jensen, Arthur E., Humboldt  
 Jensen, Leroy E., Audubon  
 Jerdee, Ingebrecht C., Clermont  
 Jessup, Parke M., Muscatine  
 Jinderlee, Joseph W., Cresco  
 Jirsa, Harold O., Iowa City  
 Johann, Albert E., Des Moines  
 Johnson, Aaron Q., Sioux City  
 Johnson, Albert P., Sigourney (L.M.)  
 Johnson, Aldis A., Council Bluffs  
 Johnson, Chester H., Cherokee  
 Johnson, Clarence A., Coon Rapids  
 Johnson, George M., Marshalltown  
 Johnson, G. Raymond, Ottumwa  
 Johnson, Harvey A., Atlantic  
 Johnson, J. A. William, Marshalltown  
 Johnson, Jonathan, Alden  
 Johnson, Melvin T., Fort Dodge  
 Johnson, Norman M., Clarinda  
 Johnson, Robert J., Iowa Falls  
 Johnson, William A., Iowa Falls  
 Johnston, C. Harlan, Des Moines  
 Johnston, Florence D., Cedar Rapids  
 Johnston, George B., Estherville  
 Johnston, Harry L., Ames  
 Johnston, Helen, Des Moines  
 Johnston, Howard H., Hampton  
 Johnston, Kenneth L., Oskaloosa  
 Johnston, Wayne A., Dubuque  
 Johnstone, Alexander A., Keokuk  
 Jones, Cecil C., Des Moines  
 Jones, Charles L., Gilmore City  
 Jones, Clare C., Spencer  
 Jones, Harry J., Cedar Rapids  
 Jones, Henry D., Schleswig  
 Jones, Lewis H., Wall Lake (L.M.)  
 Jones, Thomas S., Waukegan  
 Jongewaard, Albert J., Jefferson
- Jongewaard, Jeannette, Jefferson  
 Jordan, Carl F., Des Moines  
 Jordan, John W., Maquoketa  
 Jowett, John R., Clinton  
 Joyner, Nevill M., Washington, D. C.  
 Joynt, Albert J., Waterloo  
 Joynt, Martin J., LeMars  
 Joynt, Michael F., Marcus  
 Junger, Emil C., Soldier  
 Kaach, Harry F., Clinton  
 Kabrick, Ola A., Jackson, Minnesota  
 Kadel, Merl A., Tipton  
 Kahler, Hugo V., Reinbeck  
 Kane, Thomas E., Boone  
 Kanealy, John F., Cedar Rapids  
 Kaplan, David D., Sioux City  
 Kas, Thomas D., Sutherland  
 Kassmeyer, John C., Dubuque  
 Kast, Donald H., Des Moines  
 Katherman, Charles A., Sioux City  
 Katzenstein, William S., Minden  
 Katzmann, Frederick S., Des Moines  
 Kauffman, William A., Marshalltown  
 Kaufman, Ernest L., Fort Atkinson  
 Keech, Roy K., Cedar Rapids  
 Keen, Burlin E., Des Moines  
 Keeney, George H., Mallard
- ★Keislar, Henry D., Iowa City  
 Keith, Charles W., Strawberry Point  
 Keith, John J., Marion  
 Kelberg, Melvin R., Sioux City  
 Kelley, Edmund J., Des Moines  
 Kelley, Laurence E., Des Moines  
 Kelly, Dennis H., Des Moines  
 Kelly, John F., Sioux City  
 Kelly, Joseph L., Burlington (L.M.)  
 Keneck, John N., Algona  
 Kennedy, Edward P., Swaledale  
 Kennedy, Elizabeth S., Oelwein  
 Kennedy, William C., Somers  
 Keohen, Gerald F., Dubuque  
 Kern, Lester C., Waverly (L.M.)  
 Kerr, H. Dabney, Iowa City  
 Kerr, Johnston H., Akron  
 Kerr, William, Randolph  
 Kerr, William H., Hamburg  
 Kershner, Frank O., Clinton  
 Kersten, Ernest M., Fort Dodge  
 Kerwick, Joseph M., New Hampton  
 Kessell, James E., Des Moines  
 Kestel, John L., Waterloo  
 Kettelkamp, Enoch G., Monona  
 Key, Samuel N., Jr., Iowa City  
 Keyser, Earl L., Marshalltown  
 Keyser, Ralph E., Marshalltown  
 Kieck, Ernest G., Cedar Rapids  
 Kiesau, Frederick W., Postville  
 Kiesau, Milton F., Postville  
 Kiesling, Harry F., Lehigh  
 Kilgore, Benjamin F., Des Moines  
 Kimball, John E., West Liberty  
 Kimberly, Lester W., Davenport  
 King, David H., Batavia  
 King, Dean H., Spencer  
 King, Oran W., Des Moines  
 King, Ross C., Clinton  
 Kingsbury, Charles L., Keokuk  
 Kingsbury, Earl L., Keokuk
- ★Kirch, Walter A. W., Des Moines  
 Kirkegaard, Smith C., Estherville  
 Kitson, Walter W., Atlantic  
 Klein, John L., Muscatine (L.M.)  
 Klein, John L., Jr., Muscatine  
 Kleinberg, Henry E., Des Moines  
 Kline, Samuel, Sioux City  
 Klockslem, Harold L., Story City  
 Klockslem, Roy G., Rockwell City  
 Klok, George J., Council Bluffs  
 Kluever, Herman C., Fort Dodge  
 Knight, Benjamin L., Cedar Rapids  
 Knight, Edson C., Garwin  
 Knight, Russell A., Rockford  
 Knipe, James B., Armstrong  
 Knipper, Robert L., Jesup
- ★Knoll, Albert H., Dubuque  
 ★Knott, Peirce D., Sioux City  
 Knowles, Fred L., Fort Dodge  
 Knox, James C., Cedar Rapids  
 Knox, Thomas C., Glenwood  
 Knudsen, Hubert K., Clinton  
 Koch, George W., Anaheim, California (L.M.)  
 Koenenman, Eugene O., Barstow, California  
 Koob, William R., Brayton (L.M.)  
 Koontz, Lyle W., Vinton  
 Korfmaier, Edwin S., Grinnell  
 Kornder, Louis H., Davenport  
 Korns, Horace M., Dubuque  
 Koser, Donald C., Cherokee  
 Krakauer, Adolf, Clarinda
- ★Krakauer, Max, Davenport  
 Krause, Charles S., Cedar Rapids  
 Krejsa, Oldrich, Cedar Rapids
- Krenning, Katherine S., Los Angeles, California  
 Krepelka, George E., Osage  
 Kreul, Dwight G., Davenport  
 Kriebs, Frank J., Elkport (L.M.)  
 Kriebbaum, Horace T., Davenport  
 Krigsten, Joe M., Sioux City  
 Krigsten, William M., Sioux City  
 Kruckenberg, William G., Cedar Rapids  
 Kruml, Joseph G., Council Bluffs  
 Kuhl, Augustus B., Davenport  
 ★Kuhl, Augustus B., Jr., Davenport  
 Kuhn, Leo C., Decorah
- ★Kuitert, John H., Denver, Colorado  
 Kulp, Raymond R., Davenport
- ★Kurth, Clarence J., Council Bluffs  
 Kurtz, Cecilia M., Cedar Rapids  
 Kyle, William S., Washington  
 Labagh, Nicholas W., Mystic  
 LaDage, Leo H., Davenport  
 LaForce, Edward F., Burlington (L.M.)  
 Lage, Raleigh H., Hubbard  
 Laidley, Wallace G., Ogden  
 Lamb, Frederick H., Davenport  
 Lamb, Harry H., Davenport  
 Lambach, Frederick, Davenport (L.M.)  
 Lampe, Elmer L., Bellevue  
 Lande, Jacob N., Sioux City  
 Langworthy, Henry G., Dubuque  
 Lannon, James W., Mason City  
 Larimer, Robert N., Sioux City  
 Larsen, Elmer A., Centerville  
 Larsen, Harold T., Fort Dodge  
 Larson, Andrew G., Dickens  
 Larson, John B., Louisville, Kentucky  
 Larson, Lester E., Decorah  
 Larson, Marvin O., Hawarden
- ★Laubscher, J. Howard, Iowa City  
 Laughlin, Ralph M., Cedar Rapids  
 Launder, Frank T., San Diego, California (L.M.)  
 Lauder, Lloyd H., La Mesa, California  
 Lawrence, Joseph W., Dubuque  
 Lease, Nimrod J., Crawfordsville (L.M.)  
 Lee, Gisle M., Thompson (L.M.)  
 Lee, Robert W., Algona  
 Lee, Wayne R., Burlington  
 Leehey, Paul J., Independence  
 Leffert, Frank B., Centerville  
 Lehman, Emery W., Des Moines  
 Lehr, Sylvan M., Cedar Rapids  
 Leighton, Lewis L., Fort Dodge
- ★Leik, Donald W., Dubuque  
 Leinbach, Samuel P., Belmond  
 Leinfelder, Placidus J., Iowa City  
 Leiter, Herbert C., Sioux City  
 Leith, George G., Wilton Junction  
 Lekwa, Alfred H., Story City  
 LeMar, Clair L., Dow City  
 Lemon, Kenneth M., Oskaloosa  
 Lenaghan, Robert T., Clinton  
 Lenzmeier, Albert J., Davenport  
 Leonard, Bertram B., Jr., Anthon  
 Leonard, Frederick S., Dubuque  
 Lessenger, Ernest J., New London  
 Levin, Harry M., Waterloo  
 Levin, Stanley L., Des Moines  
 Lewis, Faye C., Webster City  
 Lewis, William B., Webster City  
 Lichter, Theodore W., Edgewood  
 Liechty, Ernest J., Kingsley  
 Lierle, Dean M., Iowa City  
 Lierman, Clifford E., Lake View  
 Liken, John A., Creston  
 Limbert, Edwin M., Council Bluffs  
 Limburg, J. Irwin, Jefferson  
 Limburg, John I., Jr., Jefferson  
 Lincoln, Simon E., Des Moines  
 Lindsay, Vernard T., Glidden  
 Linn, Ellis G., Des Moines (L.M.)  
 Liska, Edward J., Ute  
 Lister, Kenneth E., Minneapolis, Minnesota
- Littig, Elmer H., Mechanicsville  
 Little, Luther W., Atkins  
 Lloyd, John M., Washington  
 Locher, Robert C., Monticello  
 Lock, Arthur L., Rock Valley  
 Lockhart, Harold A., Cedar Rapids  
 Loeck, John F., Independence  
 Loes, Anthony M., Dubuque  
 Lohman, Frederick H., Waterloo  
 Lohmann, Carl J., Burlington  
 Lohr, Phillips E., Churdan  
 Loizeaux, Charles E., Dubuque  
 Long, Draper L., Mason City  
 Longworth, Wallace H., Boone  
 Loosbrock, John F., Perry  
 Loose, David N., Maquoketa (L.M.)  
 Lorfeld, Gerhard W., Davenport  
 Losh, Clifford W., Des Moines
- ★Lott, Guy A., Osage  
 Lott, Robert H., Carroll  
 Love, Francis L., Iowa City

- Lovejoy, E. Parish, Des Moines  
 Lovelady, Ralph, Sidney  
 Lovett, Charles E., Lineville  
 Lovett, Earl D., Vinton  
 Loving, Luther W., Estherville  
 Luehrsmann, Bernard C., Dyersville  
 Luehrsmann, Bernard H., Dyersville  
 Luginbuhl, Christian B., Des Moines  
 Luke, Edward, Coin  
 Lundvick, Arthur W., Gowrie  
 Luse, Ralph F., Clinton  
 Lutton, John D., Sioux City  
 Lynch, Robert J., Des Moines  
 Lynn, Arthur R., Marshalltown  
 Lynn, Clarence E., Dubuque  
 Lytle, Carl C., Dubuque  
 MacEwen, Ewen M., Iowa City  
 \*Mackie, Donald G., Charles City  
 Mackin, M. Charles, Des Moines (L.M.)  
 MacLeod, Hugh G., Greene  
 MacNaughton, Luther D., Eagle Grove  
 Macrae, James G., Creston  
 Madsen, Henry V., Waterloo  
 Magaret, Ernest C., Glenwood  
 \*Magdick, Carl, Charles City  
 Magee, Emery E., Waterloo  
 Maguire, Leo M., Des Moines  
 Mahoney, James D., Council Bluffs  
 Maiden, Sydney D., Omaha, Nebraska  
 Mailliard, Robert E., Storm Lake  
 Maire, Eugene J., Humphrey, Nebraska  
 Maloy, Wayland H., Shenandoah  
 Manahan, Charles A., Vinton  
 Mantle, William B., Albion  
 Mantz, Russell L., Cedar Rapids  
 Maplethorpe, Charles W., Toledo  
 Marble, Edwin J., Marshalltown  
 Marble, Ira A., Sheffield  
 Marble, Pearl L., Liscomb  
 Marble, Willard P., Marshalltown  
 Marek, Joseph E., Mason City (L.M.)  
 Maresh, George, Vancouver, Washington  
 Margolin, Julius M., Perry  
 Marinos, Harry G., Mason City  
 Maris, Cornelius, Sanborn  
 Maris, Gerrit, Hull  
 Maris, William, Sioux Center  
 Mark, Edward M., Clarksville  
 Marker, John L., Davenport  
 \*Marquis, Fred M., Waterloo  
 Marquis, George S., Des Moines  
 Marr, James, Daytona Beach, Florida  
 Marsh, Elinor, Council Bluffs  
 Marsh, Frederick E., Council Bluffs  
 Martin, James W., Cherokee  
 Martin, John P., Latimer  
 Martin, Lee R., Council Bluffs  
 Martin, Loran M., Fort Dodge  
 Martin, Ronald F., Sioux City  
 Martin, Sidney D., Carroll  
 Mason, Stella M., Mason City (L.M.)  
 Masson, Hervey F., Washington  
 Mast, Truman M., Washington  
 Mater, Dwight A., Knoxville  
 Matheson, John H., Des Moines  
 Mathias, John P., Mediapolis (L.M.)  
 Mathiasen, Aileen E., Council Bluffs  
 Mathiasen, Henning W., Council Bluffs  
 \*Mathiasen, John W., Council Bluffs  
 Matthews, Damon G., Milton  
 Matthews, Robert J., Clarinda  
 Matthey, Carl H., Davenport  
 Matthey, Walter A., Davenport  
 Mattice, Lloyd H., Sheldon  
 Mauer, George A., LeMars  
 Mauritz, Emory L., Des Moines  
 Maxwell, Charles T., Sioux City  
 Maxwell, John, What Cheer  
 May, George A., Des Moines  
 McAllister, James, Odebolt  
 McBride, James T., Des Moines (L.M.)  
 McBride, Robert H., Sioux City  
 McBurney, George F., Belmond  
 McCaffrey, Eugene H., Des Moines  
 McCall, John H., Allerton  
 McCann, John P., Marshalltown  
 McCarl, J. Jay, Sac City  
 McCarthy, Frank D., Sioux City  
 McCartney, William H., Des Moines  
 McClean, Earl D., Des Moines  
 McClintock, John T., Iowa City (L.M.)  
 McClure, Ernest C., Bussey (L.M.)  
 McClure, Gail A., Ames  
 McClurg, F. Haven, Fairfield  
 McConkie, Edwin B., Cedar Rapids  
 McConkie, Willis L., Carroll  
 McConnaughey, James T., Mount Pleasant  
 McCoy, Harold J., Des Moines  
 McCrary, Warren E., Lake City  
 McCrae, Eppie S., Eddyville (L.M.)  
 McCreedy, Murry L., Washington  
 McCreedy, John W., Whittemore  
 McCreight, George C., Des Moines  
 McCuiston, Harry M., Sioux City  
 McDaniel, John D., Marengo  
 McDonald Donald J., Des Moines  
 McDonald, James E., Mason City (L.M.)  
 McDowall, Gilbert T., Gladbrook  
 McDowell, William O., Grundy Center  
 McDelderry, Donald, Princeton  
 McFarland, Guy E., Ames  
 McFarland, Guy E., Jr., Ames  
 McFarland, Julian E., Ames  
 McGill, Arthur A., Danbury  
 McGilvra, Raymond I., Phoenix, Arizona  
 McGowan, James P., Harlan  
 McGranc, Merle J., New Hampton  
 \*McGrath, William J., Elkader (L.M.)  
 McGready, Joseph H., Independence (L.M.)  
 McGuire, Kenneth L., Keota  
 McGuire, Roy A., Fairfield  
 McHugh, Charles P., Sioux City  
 McIntosh, Charles B., Iowa City  
 McKean, Alexander C., Fergus Falls, Minnesota  
 McKean, Frank F., Allison  
 McKee, Thomas L., Keokuk  
 McKirahan, Josiah R., Wayland  
 McKitterick, John C., Burlington  
 McLaughlin, Charles W., Washington (L.M.)  
 McMahon, Thomas, Garner (L.M.)  
 McManus, Joseph P., Gracettinger  
 McMeans, Thomas W., Davenport  
 McMillen, Arch S., Fort Dodge  
 McMurray, Edward A., Newton  
 McNamee, Jesse H., Des Moines  
 McPherrin, Henry I., Des Moines  
 McQuiston, J. Stuart, Cedar Rapids  
 McTaggart, William B., Fort Dodge  
 McVay, Melvin J., Lake City  
 Mead, Frank N., Cedar Falls (L.M.)  
 Meany, John F., Rockwell  
 Meents, Diedrich J., Fort Madison  
 Meffert, Clyde B., Cedar Rapids  
 Meggers, Edward C., McGregor  
 Megorden, William H., Mount Pleasant  
 Mehler, Frank R., New London  
 Melgaard, Bennett A., Sioux City  
 Mellen, Robert G., Clinton  
 Meredith, Loren K., Des Moines  
 Mereness, Herbert D., Dolliver  
 Merillat, Herbert C., Des Moines  
 Merkel, Arthur E., Des Moines  
 Merkel, Byron M., Des Moines  
 Merrill, Charles H., Oskaloosa  
 Merritt, Arthur M., Des Moines  
 Merselis, Harold K., Audubon  
 Mershon, Clinton E., Adel (L.M.)  
 Meyer, Alfred K., Old Hickory, Tennessee  
 Meyer, Milo G., Marshalltown  
 Meyer, Valentine J., Glenwood  
 Meyers, Frank W., Dubuque  
 Meyers, Henry A., Davenport  
 Michel, Bernard A., Dubuque (L.M.)  
 Mikelson, Clarence J., Iowa City  
 Miller, Brownlow B., Tabor  
 Miller, Chester I., Iowa City  
 Miller, Donald F., Williamsburg  
 Miller, Enos D., Wellman  
 Miller, Howard L., Cedar Rapids  
 Miller, Jay R., Wellman  
 Miller, Johannes J., Ackley  
 Miller, Lawrence A., North English  
 Miller, Oscar H., Cincinnati, Ohio  
 Miller, Temple M., Muscatine  
 Miller, Wilbur R., Iowa City  
 Miller, William B., Centerville  
 Millice, Glenn S., Battle Creek  
 Millikan, Clark H., Iowa City  
 \*Mills, Ernest M., LeGrand (L.M.)  
 Mills, Frank W., Ottumwa (L.M.)  
 Miltner, Leo J., Davenport  
 Minassian, Harootune A., Des Moines (L.M.)  
 Minassian, Thaddeus A., Des Moines (L.M.)  
 Miner, James B., Jr., Charles City  
 Miner, James B., Sr., Charles City (L.M.)  
 Minkel, Roger M., Fort Dodge  
 Missman, Walter F., Klemme  
 Mitchell, Claire H., Indianola  
 Moen, Stanley T., Iowa City  
 Moerke, Robert F., Burlington  
 Moershel, Henry G., Homestead  
 Moes, Matthew J., Dubuque  
 Moffatt, Thomas W., Dubuque  
 Mol, Henry L., Grundy Center  
 Montgomery, Guy E., Washington  
 Montz, Fred, Lowden  
 Moon, Barclay J., Cedar Rapids  
 \*Mooney, Felix P., Jewell  
 Mooney, James C., Des Moines  
 Moore, Daniel V., Sioux City  
 Moore, Edson E., Iowa City  
 Moore, Gage C., Ottumwa  
 Moore, Harold H., Ottumwa  
 Moore, Harris C., Melbourne  
 Moore, Jesse C., Eldon  
 Moore, Pauline V., Iowa City  
 Moorehead, Harold B., Underwood  
 Moran, Thomas A., Melrose  
 Mordaunt, Richard H., Nevada  
 Morden, Roy R., Des Moines  
 Morgan, Earl E., Sioux City  
 Morgan, Fred B., Clinton  
 Morgan, Harold W., Mason City  
 Morgan, Paul W., Mason City  
 Morganthaler, Otis P., Templeton  
 Moriarty, Lauren R., Villisca  
 Morris, Zenella N., Stockport (L.M.)  
 Morrison, Edward D., Fort Dodge  
 Morrison, John R., Carroll  
 Morrison, John W., Alta  
 \*Morrison, Orry C., Carroll  
 Morrison, Roland B., Carroll  
 Morrison, Wesley J., Cedar Rapids (L.M.)  
 \*Morrissey, William J., Lovilia  
 Morris, Charles H., Eagle Grove (L.M.)  
 Morton, Elmer E., Manning  
 Morton, Matthew T., Estherville  
 Mosher, Martin L., Jr., Iowa City  
 Mott, William H., Farmington  
 \*Moulton, Milo W., Bellevue  
 Mountain, Elmer B., Des Moines  
 Mountain, George E., Des Moines  
 Mueller, Emil F., Dyersville  
 \*Mueller, John J., Dubuque  
 Muench, Virgil O., Nichols  
 Mugan, Robert C., Sioux City  
 \*Mullen, Leo M., Mason City  
 Mullmann, Arnold J., Omaha, Nebraska  
 Mulsow, Frederick W., Cedar Rapids  
 \*Mumma, Claude S., Santa Monica, California  
 \*Munger, Elbert E., Spencer  
 Munger, Elbert E., Jr., Spencer  
 Murchison, Kenneth, Sidney  
 Murphey, Arlo L., Fredericksburg  
 Murphy, Cornelius B., Alton  
 Murphy, George C., Waterloo  
 Murphy, James H., Des Moines  
 Murphy, Joseph J., Cedar Rapids  
 Murray, Frederick G., Cedar Rapids  
 Murray, Jonathan H., Burlington  
 Murtaugh, James E., New Hampton  
 Myers, Edward M., Woodward  
 Myers, Judson W., Postville  
 Myers, Kermit W., Sheldon  
 Nagyfy, Stephen F., Iowa City  
 Nakashima, Victor K., Des Moines  
 Nash, Edwin A., Ottumwa  
 Nauman, Ernest C., Waterloo  
 Neal, Emma J., Cedar Rapids  
 Nederhiser, Morgan I., Cascade  
 Needles, Roscoe M., Atlantic  
 Nelken, Leonard, Clinton  
 Nelken, Viola D., Clinton  
 Nelson, Arnold L., Des Moines  
 Nelson, Carroll C., Red Oak  
 Nelson, Fred L., Ottumwa  
 Nelson, Frederick L., Jr., Ottumwa  
 Nelson, Harry E., Dayton  
 Nelson, Leo C., Jefferson  
 Nelson, Paul O., Emmetsburg  
 Nelson, Robert J., Clinton  
 Nemece, Joseph J., Cedar Rapids  
 Nesler, Alfred B., Dubuque  
 Netolicky, Joseph Y., Solon  
 Netolicky, Robert Y., Cedar Rapids  
 Netolicky, Wesley J., Cedar Rapids  
 Neufeld, Robert J., Davenport  
 Neuzil, William J., Cedar Rapids  
 Newland, Don H., Belle Plaine  
 \*Newland, Elmer R., Drakesville  
 Newlove, Frank E., Batavia, New York  
 Newman, Cloyce A., Bode  
 Newman, Robert W., Iowa City  
 Niblock, George F., Derby  
 Nicholson, Clyde G., Spirit Lake  
 Nicoll, Charles A., Panora  
 Nicoll, David T., Mitchellville (L.M.)  
 Nielsen, Rudolph F., Cedar Falls  
 Nielson, Arthur L., Harlan  
 Niemann, Theodore V., Brooklyn  
 Nierling, Paul A., Cresco  
 Noble, Frederick W., Fort Madison  
 Noble, Harold F., Fort Madison  
 Noble, Nelle S., Des Moines  
 Noble, Rusl P., Alta  
 Noé, Carl A., Cedar Rapids  
 Noé, Charles F., Amana (L.M.)  
 Nolan, John C., Corning  
 Nomland, Ruben, Iowa City  
 Noonan, James J., Marshalltown  
 Nord, Donald H., Cambridge  
 Norment, John E., Clinton  
 North, Frank R., Winfield  
 Norton, Alva C., Rockwell City (L.M.)  
 Norton, Vera V., Waverly  
 Noun, Louis J., Des Moines



- Noun, Maurice H., Des Moines  
 Nourse, Leslie M., Des Moines  
 Null, Frederick F., Hawarden  
 Nyquist, David M., Eldora  
 Nysewander, Christian, Des Moines (L.M.)
- Ober, Frank G., Burlington  
 Obermann, Charles F., Cherokee  
 O'Boyle, Cyril P., Dubuque  
 O'Brien, Cecil S., Iowa City  
 O'Brien, Lyl J., Iowa City  
 O'Brien, Stephen A., Mason City  
 O'Connor, Edwin C., New Hampton  
 O'Donoghue, Arch F., Sioux City  
 O'Donoghue, James H., Storm Lake
- ★Oelrich, Carl D., Sioux Center  
 Oggel, Herman D., Maurice  
 O'Keefe, John E., Waterloo (L.M.)  
 O'Keefe, Paul T., Waterloo  
 Okerlin, Oscar W., Essex  
 O'Leary, Francis B., George  
 Olsen, Martin L., Des Moines  
 Olson, Evelyn M., Winterset  
 Olson, Paul F., North Hollywood, California
- Olson, Russell L., Northwood  
 O'Neal, Harold E., Tipton  
 Osborn, Clarence R., Dexter  
 Osineup, Paul W., Sioux City  
 Osten, Edrette H., Northwood  
 O'Toole, Laurence C., LeMars  
 Ott, Martin D., Davenport  
 Otto, Paul C., Fort Dodge  
 Overton, Lewis M., Des Moines
- ★Owen, William E., Osage  
 Owen, William R., Osage  
 Pace, Arthur A., Toledo (L.M.)  
 Padgham, John T., Grinnell  
 Page, Addison C., Des Moines (L.M.)  
 Pagelsen, Otto H., Iowa Falls  
 Pahlas, Henry M., Dubuque  
 Paige, Ralph T., LaPorte City  
 Painter, J. Carl, Dubuque
- ★Painter, Robert C., Dubuque  
 Palmer, Carson W., Guttenberg
- ★Panzer, Edward J. C., Stanton  
 Paragas, Modesto R., Creston  
 Parish, John R., Grinnell  
 Parish, Ora F., Grinnell (L.M.)  
 Park, Elmer R., Sioux City  
 Parke, John, Cedar Rapids  
 Parker, Edward S., Ida Grove (L.M.)  
 Parker, James D., Fayette  
 Parker, Robert L., Des Moines  
 Parks, Claude O., Iowa City  
 Parry, Roy E., Scranton  
 Parsons, Harry C., Grinnell  
 Parsons, Irving U., Omaha, Nebraska (L.M.)
- Parsons, John C., Des Moines  
 Parsons, Percival L., Traer  
 Paschal, George A., Webster City  
 Pascoe, Paul L., Carroll  
 Patterson, Alpheus W., Des Moines  
 Patterson, John N., Burlington (L.M.)  
 Patterson, Roy A., Webster City  
 Paul, John D., Anamosa  
 Paul, William D., Iowa City  
 Paulsen, Herbert B., Harris  
 Paulus, Edward W., Iowa City  
 Paulus, James W., Dubuque  
 Payne, Rosewell H., Exira  
 Pearlman, Leo R., Des Moines  
 Pearson, George J., Burlington  
 Peart, John C., Davenport  
 Pease, Herbert, Alta Vista  
 Peasley, Harold R., Des Moines  
 Peck, Raymond E., Davenport  
 Peggs, Harold J., Des Moines  
 Peisen, Conan J., Des Moines  
 Pelz, Werner P., Nashua  
 Pence, James W., Columbus Junction  
 Penn, Eugene C., West Des Moines  
 Perkins, Franklyn C., Hedrick  
 Perkins, Rolla W., Sioux City
- ★Perkins, Rollin M., Davenport  
 Perley, Arthur E., Waterloo  
 Perrin, H. Joyce, Des Moines  
 Peshau, Waldo E., Cedar Rapids  
 Petersen, Emil C., Atlantic  
 Petersen, Millard T., Atlantic
- ★Petersen, Robert E., Iowa City  
 Petersen, Vernon W., Clinton  
 Peterson, Evan A., Burlington  
 Peterson, Frank R., Iowa City  
 Peterson, John C., Jr., Hartley  
 Peterson, Ray W., Clear Lake  
 Petty, Wallace S., Lincoln, Nebraska  
 Pfeiffer, Eric P., Des Moines  
 Pfeiffer, Ernst, Hartley  
 Pfeiffer, Harry E., Cedar Rapids  
 Pfohl, Anthony C., Dubuque  
 Phelps, Richard E. H., New Sharon  
 Phillips, Albin B., Clear Lake (L.M.)
- Phillips, Allan B., Des Moines  
 Phillips, Clarence P., Muscatine  
 Phillips, Isaac H., Missouri Valley  
 Phillips, Jesse H., Montezuma (L.M.)  
 Phillips, Walter B., Montezuma  
 Pickard, John C., Dubuque  
 Pielenbrock, Frank J., Dubuque  
 Piery, Kenneth C., Ames  
 Pierson, Lawrence E., Sioux City  
 Pitluck, Harry L., Laurens  
 Plankers, Arthur G., Dubuque  
 Plass, Everett D., Iowa City  
 Plimpton, Robert P., Denison  
 \*Pollock, Roscoe, Douds-Leando  
 Poole, Harold E., Iowa City  
 Porstmann, Louis J., Davenport  
 Porter, Charles E., Redfield  
 Porter, Robert J., Des Moines  
 Porter, S. Dale, Grinnell  
 Posner, Edward R., Des Moines (L.M.)  
 Powell, Burke, Albia (L.M.)  
 Powell, Lester D., Des Moines  
 Powell, Robert A., Farragut  
 Powell, Vclura E., Red Oak  
 Powers, Henry R., Emmetsburg  
 Powers, Ivan R., Waterloo  
 Pratt, Elmer B., Des Moines  
 Preece, Wade O., Waterloo  
 Prentice, George L., Bloomfield  
 Presnell, J. William, Scranton  
 Presnell, William H., Charlotte  
 Prettyman, Oscar R., Manson  
 Prewitt, Leland H., Ottumwa  
 Price, Alfred S., Des Moines  
 Priessman, Frank A., Keokuk  
 Priestley, Joseph B., Des Moines  
 Pringle, Jesse A., Bagley (L.M.)  
 Proctor, Rothwell D., Cedar Rapids  
 Prouty, James V., Cedar Rapids  
 Ptacek, Joseph L., Webster City  
 Pumphrey, Loira C., Keokuk  
 Purdy, William O., Des Moines  
 Putnam, Chester L., Des Moines  
 Quinn, Francis P., Dubuque  
 Ralston, Furman P., Knoxville  
 Rambo, Cyrus C., Creston  
 Rambo, David T., Ottumwa  
 Randall, John H., Iowa City  
 Randall, William L., Hampton  
 Rankin, Isom A., Iowa City  
 Rankin, John R., Keokuk  
 Rankin, William, Keokuk  
 Ransom, Harry E., Des Moines  
 Rater, David L., Ottumwa  
 Rathe, Herbert W., Waverly  
 Rausch, Gerald R., Oshkosh, Wisconsin  
 Ravitts, Joseph L., Montezuma  
 Raw, Elmer J., Pierson  
 Redmond, James J., Cedar Rapids  
 Redmond, Thomas M., Monticello  
 Reed, Andrew L., Estherville  
 Reed, Guy P., Davis City (L.M.)  
 Reed, Paul A., Iowa City  
 Reed, Purl E., Council Bluffs  
 Reeder, James E., Sioux City  
 Reeder, James E., Jr., Sioux City  
 Reiley, Richard E., Minneapolis, Minnesota
- Reiley, William S., Red Oak (L.M.)  
 Reimers, Robert S., Fort Madison  
 Reinicke, Edward L., Dubuque (L.M.)  
 Reinsch, Frank, Ashton  
 Render, Norman D., Clarinda  
 Rendleman, William H., Davenport  
 Reuber, Roy N., Mason City  
 Reuling, Frank H., Waterloo  
 Reynolds, Albert C., Des Moines  
 Reynolds, Earl O., Greenfield  
 Rhodes, John M., Pocahontas  
 Rhomberg, Charlotte, Dubuque  
 Rhomberg, Edward B., Guttenberg  
 Rice, Floyd W., Des Moines  
 Richardson, Leon F., Collins  
 Richmond, Arthur C., Fort Madison  
 Richmond, Frank R., Fort Madison  
 Richmond, Paul C., New Hampton  
 Richter, Harold J., Albia  
 Ridenour, Joseph E., Waterloo  
 Riegelman, Ralph H., Des Moines  
 Rieniets, John H., Cedar Rapids  
 Riess, Stephen, Cedar Rapids  
 Riggert, Leonard O., Clinton  
 Riggie, Frank P., Fort Madison  
 Riley, John, Exira (L.M.)  
 Rinel, George W., Bedford  
 Ringena, Engelle J., Brooklyn  
 Rinker, George E., Oto  
 Risk, Howard, Oelwein (L.M.)
- ★Ristine, Leonard P., Mount Pleasant  
 Ritter, John P., Maquoketa  
 Rizzo, Frank, Sibley  
 Robb, James B., Chariton  
 Roberts, Charles R., Dysart  
 Roberts, Francis L., Spirit Lake
- Roberts, Francis M., Knoxville  
 Roberts, Justus B., Ottumwa  
 Robertson, Andrew A., Council Bluffs  
 Robertson, Treadwell A., West Liberty  
 Robinson, Robert E., Waverly (L.M.)  
 Robinson, Van C., Des Moines  
 Rock, John E., Davenport  
 Rockwell, Maryelda, Clinton  
 Rodawig, Donald F., Spirit Lake  
 Roddy, Harold J., Mason City  
 Rodemeyer, Frederick H., Sheffield  
 Roder, Carl F., Dumont  
 Rodgers, Lewis A., Oskaloosa (L.M.)  
 Roe, Cullen B., Afton  
 Rogers, Claude B., Earlville  
 Rohlf, Edward L., Jr., Waterloo  
 Rohner, Frank J., Iowa City (L.M.)  
 Rohrbacher, William M., Iowa City  
 Rohwer, Roland T., Sioux City  
 Rolf, Floyd O., Parkersburg  
 Rolf, Fred A., Aplington  
 Romine, John H., Webster City  
 Rominger, Clark R., Waukon  
 Rominger, Clark W., Waukon  
 Roost, Frederick H., Sioux City  
 Rose, Alvin A., Story City  
 Rose, Joseph E., Grundy Center  
 Roseberg, Bertil, Iowa City  
 Rosebrook, Lee E., Ames  
 Rosendorff, Charlotte, Bettendorf  
 Ross, Arthur J., Jr., Perry  
 Rost, Glenn S., Halstead, Kansas  
 Rotkow, Maurice J., Des Moines  
 Rowan, Charles J., Laguna Beach, California
- Rovat, Harry L., Des Moines  
 Rowe, Frank N., Denison  
 Rowley, William G., Sioux City  
 Royal, Lester A., West Liberty  
 Royal, Malcolm A., Des Moines  
 Russ, Jesse E., Rake  
 Russell, Elwood P., Burlington  
 Russell, John, Yuma, Arizona  
 Russell, Ralph E., Waterloo  
 Rust, Emery A., Webb  
 Ruth, Verl A., Des Moines  
 Ryan, Allen J., Harlan  
 Ryan, Cyril J., Creston  
 Ryan, Granville N., Des Moines (L.M.)  
 Ryan, Martin J., Sioux City  
 Saar, Jesse L., Donnellson  
 Saar, John W., Donnellson  
 Sabs, Adolph L., Iowa City  
 St. Onge, Joseph A., Sioux City  
 Salisbury, Frederick S., American Lake, Washington
- Sampson, Carl E., Creston  
 Sampson, Frank E., Creston (L.M.)  
 Sams, Joseph H., Clarion (L.M.)  
 Samuelson, Carl A., Sheldon  
 Sanders, George E., Des Moines  
 Sanders, Matthew G., Fort Dodge  
 Sanders, William E., Long Beach, California
- Sarff, Floyd G., Logan  
 Sartor, Guido J., Mason City  
 Sartor, Pierre, Titonka  
 Sattler, Dwight G., Washington  
 Sawyer, Grace M., Woodward  
 Sawyer, Prince E., Sioux City  
 Sayler, Harley L., Des Moines (L.M.)  
 Sayre, Ivan K., St. Charles  
 Scales, Emmet T., Des Moines  
 Scanlan, George C., DeWitt  
 Scanlan, Maurice, DeWitt  
 Scanlon, George H., Iowa City
- ★Scannell, Raymond C., Carroll  
 Schadt, Frederick C., Williamsburg  
 Schaefer, Paul H., Burlington  
 Schaefer, Lawrence G., Gladbrook  
 Schaeferle, Martin J., Eagle Grove  
 Schafer, Leander H., DeWitt  
 Schanche, Arthur N., Ames  
 Scharle, Theodore, Dubuque  
 Scharnweber, Henry C., Boone  
 Scheldrup, Eugene W., Iowa City  
 Scheller, Donald L., Des Moines  
 Schenk, Irwin, Des Moines
- ★Schiff, Joseph, Anita  
 ★Schlaser, Verne L., Des Moines  
 Schmitz, Henry C., Des Moines  
 Schnug, George E., Dows  
 Schoon, Harold W., Sibley
- ★Schrader, Merlin A., Webster City  
 Schreiner, Charles A., Ollie  
 Schroeder, Adrian J., Marshalltown  
 Schroeder, Frank N., Ryan  
 Schroeder, Leslie V., Walcott  
 Schroeder, Mergren C., Pella  
 Schrup, Joseph H., Dubuque (L.M.)  
 Schueller, Charles J., Dubuque  
 Schultz, Albert A., Fort Dodge  
 Schultz, Ivan T., Humboldt  
 Schultz, Nelle E. T., Humboldt



- Schwartz, John W., Sioux City  
 Scott, Philip A., Spirit Lake  
 Scott, Sophie H., Des Moines (L.M.)  
 Scott, Walter E., Adel (L.M.)  
 Seaman, Charles L., Cherokee  
 Sedlacek, Leo B., Cedar Rapids  
 Seibert, Cecil W., Waterloo  
 Seidler, William A., Jamaica (L.M.)  
 Seiler, Raymond A., Blainstown  
 Sellards, Joseph W., Clarinda  
 Sellers, Earl D., Moulton  
 Sells, Benjamin B., Independence  
 Sells, Frank W., Osceola  
 ★Sells, Robert L., Jr., Iowa City  
 Selman, Ralph J., Ottumwa  
 Selo, Rudolph A., Hazleton  
 Senska, Frank R., Brandon  
 Senty, Elmer G., Davenport  
 Severson, George J., Slater  
 Shafer, Arthur W., Davenport  
 Shafer, Lee E., Davenport  
 Shane, Robert S., Pilot Mound  
 Shannon, Edwin R., Waterloo  
 Sharpe, Donald C., Dubuque  
 Shaw, Albert E., Des Moines  
 Shaw, Ernest E., Indianola  
 Shaw, Mathew M., Madrid  
 Shaw, Robert E., Waverly  
 Shea, Thomas E., Storm Lake  
 Sheimo, Stanton L., San Diego, California  
 Shelton, Charles D., Bloomfield  
 Shepherd, Loyd K., Des Moines  
 Sherlock, John H., Rock Rapids  
 Sherman, Richard C., Farley  
 Shine, Dan W., Oelwein  
 Shonka, Thomas E., Malvern  
 Shope, Charles D., Greenfield  
 Shorey, Joseph R., Davenport  
 Shrader, John C., Fort Dodge  
 Shulkin, Samuel H., Sioux City  
 Shumate, C. Frank, Miles  
 Shurtleff, Raymond S., Davenport  
 Shurts, John J., Eldora  
 Siberts, Frank L., Hampton  
 Sibley, Edward H., Sioux City  
 Sievers, Claudius L., Denison  
 Sigworth, Fred B., Anamosa  
 Simmons, Ralph R., Des Moines  
 Simons, James D., Leon  
 ★Simonsen, Marie N., Sioux City  
 Singer, Siegmund F., Ottumwa  
 Sinn, Irvin J., Williamsburg  
 Sinning, Augustus, Iowa City  
 Sinning, John E., Marshalltown  
 Skallerup, Walter M., Walker  
 ★Skelly, Paul B., Jr., Maquoketa  
 Skultety, James A., Des Moines  
 Slama, John T., Marengo  
 Smazal, Stanley F., Davenport  
 Smead, Howard H., Los Angeles, California  
 Smead, Leslie L., Newton  
 Smiley, Ralph E., Mason City  
 Smith, Arthur F., Manning  
 Smith, Cecil R., Wyoming  
 Smith, Channing G., Granger  
 Smith, Elmer M., Eagle Grove  
 Smith, Eugene E., Waterloo  
 Smith, Ferdinand J. E., Milford (L.M.)  
 Smith, Franklin C., Mount Ayr (L.M.)  
 ★Smith, Fred M., Iowa City  
 Smith, Harold F., Iowa City  
 Smith, Herman J., Des Moines  
 Smith, Homer A., Correctionville  
 Smith, Howard W., Woodward  
 Smith, Jason N., Iowa City  
 Smith, John E., Clarence  
 Smith, Lawrence D., Des Moines  
 Smith, Rex I., Waterloo  
 Smith, Robert A., Albion  
 Smith, Robert T., Granger  
 Smith, Roland T., Minot, North Dakota  
 Smith, Sidney D., Waterloo  
 Smouse, William O., Des Moines (L.M.)  
 ★Smrha, James A., Cedar Rapids  
 Smythe, Arnold M., Des Moines  
 ★Snodgrass, Ralph W., Des Moines  
 Snyder, Dean C., DeWitt  
 Snyder, Glen E., Deer Park, Washington  
 Snyder, John A., Roland  
 Snyder, Raleigh R., Des Moines  
 Soe, Peder, Kimballton (L.M.)  
 Sohn, Herbert A., Des Moines  
 Sokol, Charles R., State Center  
 Solis, Delmar B., Chariton  
 Somers, Pearl E., Grinnell (L.M.)  
 Sones, Clement A., Des Moines  
 Sorensen, Elmer M., Red Oak  
 Sorensen, Regnar M., Des Moines  
 Sorensen, Aral C., Davenport  
 Sorensen, Kermit R., Sabula  
 Soucek, Adolph, Mount Pleasant  
 Spain, Robert T., Conrad  
 Sparks, Francis R., Waverly (L.M.)  
 Spaulding, Homer L., Ankeny (L.M.)  
 Spear, William M., Oakdale  
 Speidel, Glenn P., Providence, Rhode Island  
 Spellman, George G., Iowa City  
 Spellman, Martin T., Cedar Rapids  
 Sperow, Wendell B., Nevada  
 Spielhagen, Guenther F., Iowa City  
 Spilman, Harold A., Ottumwa  
 ★Spinharney, Lester J., Cherokee  
 Springer, Floyd A., Des Moines  
 Sproul, William M., Des Moines  
 Stabo, Trond N., Decorah (L.M.)  
 Stadler, Harold E., Iowa City  
 Stafford, James F., Lovilia  
 Stalford, John H., Sac City (L.M.)  
 Stam, Nicholas C., Mason City  
 Standefer, Joe M., Des Moines  
 Standeven, James W., Oakland  
 Stansbury, John E., Cedar Rapids  
 Stansbury, J. Robert, Dallas, Texas  
 Stark, Callistus H., Cedar Rapids  
 Starr, Charles F., Mason City  
 Starry, Allen C., Sioux City  
 Stauch, Martin J., Whiting  
 Staudt, Alfred J., Waterloo  
 Stearns, A. Bryce, Detroit, Michigan  
 Stearns, Frederick T., Osage  
 Steelsmith, Frank R., Des Moines  
 Steenrod, Emerson J., Iowa Falls  
 Steffens, Lincoln F., Dubuque  
 Steffy, Fred L., Keokuk  
 Stegman, Jacob J., Marshalltown  
 Steindler, Arthur, Iowa City  
 Stephen, Paul, Manchester  
 Stephen, Raymond J., Cedar Rapids  
 Stepp, James K., Tulsa, Oklahoma  
 Sternagel, Fred, West Des Moines  
 Sternberg, Walter A., Mount Pleasant (L.M.)  
 Sternhill, Irving, Mason City  
 Sternhill, Isaac, Council Bluffs  
 Stevenson, Eber F., Waterloo (L.M.)  
 Stevenson, William W., Rockwell City  
 Stewart, Alexander P., Inwood  
 Stewart, Robert A., Independence  
 Stewart, William L., Mediapolis  
 Stinson, Alice C., Estherville  
 Stoakes, Charles S., Lime Springs  
 Stober, Raymond W., Charles City  
 Stodden, Frank J., Jefferson, South Dakota  
 Stoecks, William A., Davenport  
 Stolley, Jordan G., Moline  
 Straub, Joseph J., Dubuque  
 Strawn, John T., Des Moines  
 Stribley, Harry A., Dubuque  
 Stroy, Herbert E., Osceola  
 ★Struble, Gilbert C., Ottumwa  
 Struck, Kuno H., Davenport  
 Stuart, Percy E., Nashua  
 Stumme, Ernest H., Denver  
 ★Stump, Robert B., Iowa City  
 Stutsman, Eli E., Washington  
 ★Stutsman, Robert E., Washington  
 Suchomel, Thomas F., Cedar Rapids  
 Sugg, Herbert R., Clinton  
 Sulek, Arthur E., Cedar Rapids  
 Sullivan, Lawrence F., Donahue  
 ★Sult, William F., Gilman  
 Sulzbach, John F., Oelwein  
 Sunderbruch, John H., Davenport  
 Svendsen, Reinert N., Decorah  
 Swab, Charles C., Cedar Rapids  
 Swallum, James A., Storm Lake  
 Swallum, Troy W., Spencer  
 Swanson, John E., Sioux City  
 Swanson, Leslie W., Mason City  
 Swift, Frederick J., Jr., Detroit, Michigan  
 Swift, Frederick J., Maquoketa  
 Swinney, Roy G., Richland  
 Sybenga, Jacob J., Pella  
 Synhorst, John B., Des Moines  
 Sywassink, George A., Muscatine  
 Tait, John H., Des Moines  
 Talley, Louis F., Marshalltown  
 Tamisiea, Francis X., Missouri Valley  
 Tamisiea, John L., Missouri Valley  
 Tandy, Roy W., Morning Sun  
 Tapper, George W., Monona  
 Tarrasch, Ernest L., Springfield, Missouri  
 Taylor, Charles L., Pomeroy  
 Taylor, Edward D., Davenport (L.M.)  
 ★Taylor, Ingram C., Fairfield  
 Taylor, Lawrence A., Ottumwa  
 Taylor, Maude, Ottumwa  
 Taylor, Robert S., Davenport  
 Teufel, John C., Davenport  
 Tharp, Herbert M., Monroe  
 Thatcher, Wilbur C., Fort Dodge  
 Thayer, Wilbur F., Ochevedan  
 Thein, Garfield M., Oelwein  
 Theisen, Roy I., Dubuque  
 Thielen, Edward W., Waterloo  
 Thielen, John B., Fonda  
 ★Thielen, Michael H., Grundy Center  
 Thomas, Clifford W., Mason City  
 Thomas, Clyde E., Keystone  
 Thomas, Colin G., Monticello  
 Thomas, Louis A., Red Oak  
 Thomas, William H., McGregor  
 Thompson, Elvin D., Jefferson  
 Thompson, Gilbert N., Jesup  
 Thompson, Harry F., Forest City (L.M.)  
 Thompson, Howard E., Dubuque  
 Thompson, James R., Waterloo  
 Thompson, Kenneth L., Oakland  
 Thompson, Virginia D., Des Moines  
 Thompson, William L., Bayard (L.M.)  
 Thoms, Adolph N., Cedar Falls  
 Thomsen, Thomas F., Red Oak  
 Thorburn, Oral L., Ames  
 Thornburg, William V., Guthrie Center (L.M.)  
 Thornell, Joseph B., Council Bluffs  
 Thornton, F. Eberle, Des Moines  
 Thornton, John W., Lansing  
 Thornton, Thomas F., Waterloo  
 Thorsness, Edwin T., Dubuque  
 Thorson, John A., Dubuque  
 Throckmorton, J. Fred, Des Moines  
 Throckmorton, Jeannette Dean, Des Moines (L.M.)  
 Throckmorton, Robert F., Des Moines (L.M.)  
 Throckmorton, Scott L., Chariton  
 Throckmorton, Tom B., Des Moines  
 Throckmorton, Tom D., Des Moines  
 Tice, Claude B., Mason City  
 ★Tice, George I., Mason City  
 ★Tice, W. Arnold, Mason City  
 Tidrick, Robert T., Iowa City  
 Tierney, Edmund J., Sioux City  
 Tilton, John J., Maquoketa  
 Tinley, Mary L., Council Bluffs (L.M.)  
 Tinley, Mathew A., Council Bluffs  
 Tinley, Robert E., Council Bluffs  
 Tinsman, Eugene, Orient  
 ★Titus, Elton L., Iowa City  
 Todd, Donald W., Guthrie Center  
 Todd, V. Stanley, Livingston, California  
 Tolliver, Hillard A., Charles City  
 Tombaugh, Frank M., Burlington (L.M.)  
 Tompkins, Erle D., Clarion  
 Toubes, Abraham A., Des Moines  
 Towle, Robert A., Davenport  
 Tracy, John S., Sioux City  
 Traister, John E., Eddyville  
 Trey, Bernhard L., Marshalltown  
 Treynor, Jack V., Council Bluffs  
 Trimbo, Joseph H., Chelsea  
 Tripp, Leroy R., Sioux City  
 Trueblood, Clare A., Indianola  
 Trunnell, Thomas L., Waterloo  
 Trussell, Ray E., Iowa City  
 Turner, George E., West Des Moines  
 Turner, Howard V., Des Moines  
 Turner, Lee R., Renwick  
 Turner, William R., Fort Dodge  
 Tyler, Charles W., Polk City (L.M.)  
 Tyrrill, Joseph W., Des Moines (L.M.)  
 Unger, David, Des Moines  
 Updegraff, Charles L., Boone  
 Valiquette, Frank G., Sioux City  
 Van Besien, George J., Weston, Missouri  
 Van Camp, Thomas H., Breda  
 ★Vander Laan, Cornelius A., Iowa City  
 Vander Meulen, Herman C., Pella  
 Vander Stoep, Harry L., LeMars  
 Vander Veer, Frank L., Janesville (L.M.)  
 Van Duzer, William R., Casey  
 Van Epps, Clarence E., Iowa City  
 Van Epps, Eugene F., Clinton  
 Vangsness, Ingmar C., Sioux City  
 ★Van Hale, Laurence A., Des Moines  
 Van Metre, Paul W., Rockwell City  
 Van Ness, Charles S., Peterson  
 Van Patten, Ernest M., Fort Dodge  
 Van Tiger, William H., Eldora  
 Van Werden, Benjamin D., Keokuk  
 Van Winkle, Howard L., Cedar Rapids  
 Van Zante, Peter, Pella  
 Van Zanten, Will, Brighton  
 Vaubel, Ellis K., Estherville  
 Veldhouse, Richard H., Cedar Rapids  
 Veltman, John F., Winterest  
 Vermeer, Gerritt E., McAllen, Texas  
 Vernon, Fred G., Jewell  
 Vest, William M., Iowa City  
 Vesterborg, Peder H., Forest City (L.M.)  
 Victorine, Edward M., Cedar Rapids  
 Vineyard, Thomas L., Ottumwa  
 Vinson, Harry W., Ottumwa  
 Voigt, Ernest J., Burlington  
 Voigt, Frank O. W., Oskaloosa  
 Vollmer, Karl, Davenport (L.M.)  
 von Lackum, Herman J., Dysart (L.M.)



- von Lackum, John K., Cedar Rapids  
 Vorpahl, Rudolph A., Cedar Rapids  
 Voss, Otto R., Davenport  
 Waddell, Jesse C., Paton  
 Waggoner, Charles V., Clinton  
 Wagner, Eugene C., Des Moines  
 Wagner, James A., Primghar  
 Wahrer, Frederick L., Marshalltown  
 Wailes, John W., Davis City (L.M.)  
 Wainwright, Maxwell T., Sioux City  
 Wakeman, Allie H., Fort Dodge  
 Walker, Charles C., Des Moines  
 Walker, Harry L., Cedar Rapids  
 Walker, Herbert P., Clarion  
 \*Walker, John M., Dubuque  
 Walker, Thomas G., Riceville  
 Walker, Thomas S., Riceville (L.M.)  
 Wall, David, Ames  
 Wallace, Evelyn G., Iowa City  
 Wallace, Robert M., Algona  
 Wallahan, Jay H., Corning (L.M.)  
 Walliker, Wilbur M., Clinton  
 \*Walsh, Eugene L., Hawkeye  
 \*Walsh, William E., Hawkeye  
 \*Walston, Edwin B., Des Moines (L.M.)  
 Walton, Seth G., Hampton  
 Walorad, William W., Dunlap  
 Wanamaker, Ambrose E., Hamburg (L.M.)  
 Wanamaker, Ambrose R., Hamburg  
 Ward, Donovan F., Dubuque  
 Ward, Loraine W., Oelwein  
 Ward, Robert H., Boston, Massachusetts  
 Ward, Thomas L., Arnolds Park  
 Ware, Matt, West Branch  
 Ware, Stephen C., Iowa City  
 Warner, Emory D., Iowa City  
 Warner, Ervin W., Clarion  
 Warren, Elbert T., Stuart  
 Waterbury, Charles A., Jr., Waterloo  
 Watkin, Clifford R., Sioux City  
 Watson, Elbert J., Diagonal (L.M.)  
 Watters, George H., Des Moines  
 Watters, Phil G., Des Moines  
 Watters, Vernon G., Jr., Iowa City  
 Watts, A. Fred, Seattle, Washington  
 Watts, Clyde F., Marengo  
 Weaver, Kenneth H., Union  
 Webb, Daniel R., Jr., Cedar Rapids  
 Webb, Walter W., Iowa City  
 Webb, Waterman T., Fairfield  
 Weber, Frank N., Walnut  
 Weber, Leslie E., Wapello  
 Weber, William W., Pomeroy  
 Wedel, James R., Keokuk  
 Weems, Nev E., Paullina  
 Wehman, Edward J., Burlington  
 Weih, Elmer P., Clinton  
 \*Weih, Jack E., Iowa City  
 Weinberg, Harry B., Davenport  
 Weingart, Julius S., Des Moines  
 Weir, Edward C., Council Bluffs  
 Weir, Matt B., Griswold  
 Weis, Howard A., Davenport  
 Weland, Regis E., Cedar Rapids  
 Wells, Fred L., Des Moines (L.M.)  
 Wells, Rodney C., Marshalltown  
 Wendell, Margaret R., Ames  
 Wentworth, Laydon S., Marble Rock  
 Wentzien, Albert J., Tama  
 Werner, Carl A. A., Des Moines  
 Werner, Harold T., Fort Madison  
 West, Alroy G., Council Bluffs  
 West, George H., Armstrong  
 West, Harry D., Des Moines  
 West, Walter E., Centerville  
 West, William W., Clarinda  
 Westenberger, Joseph C., St. Ansgar  
 Westly, Gabriel S., Manly  
 Westly, Soren S., Manly  
 Weston, B. Raymond, Mason City  
 Weston, Robert A., Des Moines  
 Wetrich, Max F., Grand Junction  
 Weyer, Joseph J., Fort Dodge  
 Whitaker, Ben T., Boone  
 White, Harold E., Knoxville  
 White, Paul A., Davenport  
 White, Seward, Olin  
 Whitehill, Nelson M., Boone  
 Whitehouse, William N., Ottumwa  
 Whitley, Ralph L., Osage (L.M.)  
 Whitmer, Lysle H., Wilton Junction  
 Whitmire, James E., Sumner  
 Whitmire, William L., Sumner (L.M.)  
 Wicks, Ralph L., Boone  
 Wilcox, Delano, Malcom (L.M.)  
 Wilcox, Edgar B., Oskaloosa  
 Wilcox, Keith E., Muscatine  
 Wilder, Agnes R., Atlantic  
 Wiley, Ralph E., Fontanelle  
 Wilke, Frank A., Perry  
 Wilkinson, Levi J., Laurel  
 Willett, Wendell M., Washington, D. C.  
 Willett, Wilton J., Manchester  
 Williams, Edward B., Montezuma (L.M.)  
 Williams, Edward M., Oskaloosa  
 Williams, Edward M., Norway  
 Williams, Frank S., Villisca  
 Williams, Nathan B., Belle Plaine  
 Williams, Robert L., Lakota  
 Wilson, Frank D., Sioux City  
 Wilson, Fred C., Colesburg  
 Wilson, Fredric L., Sioux City  
 Wilson, Fredric W., Sioux City  
 Winder, Clifford D., Waterloo  
 Winnett, Edwin B., Des Moines  
 Wintenburg, Edward J., Van Nuys, California  
 Winter, Louis C., Wilton Junction  
 Wirsig, Arnold O., Shenandoah  
 Wirtz, Dwight C., Des Moines  
 Wise, James H., Cherokee  
 \*Witte, Herbert J., Marathon  
 Wolcott, Ruth F., Spirit Lake  
 Wolcott, W. Eugene, Warrenton, Virginia  
 Wolf, Henry H., Elgin  
 Wolfe, Joseph H., Iowa City  
 Wolfe, Otis D., Marshalltown  
 Wolfe, Otis R., Marshalltown  
 Wolfe, Russell M., Marshalltown  
 Wolfe, Wilson C., Ottumwa  
 Wolfson, Harold, Kingsley  
 \*Wollmann, Walter W., Iowa City  
 Wolpert, Paul L., Onawa  
 Wolverton, Benjamin F., Cedar Rapids  
 Wood, John R., Wadena  
 Wood, Rollin W., Newton  
 Woodard, Floyd O., Des Moines  
 Woodbridge, James W., Emmetsburg (L.M.)  
 Woodhouse, George R., Vinton  
 Woodhouse, Keith W., Cedar Rapids  
 Woods, Andrew H., Iowa City  
 Woods, Arthur D., State Center  
 Woods, Herbert C., Tama  
 Woods, Hugh B., Des Moines  
 Woodward, Edward R., Chicago, Illinois  
 Woodward, Lee R., Mason City  
 Worley, Charles L., Ottumwa  
 Wray, Clarence M., Iowa Falls  
 Wray, Robert M., Cedar Rapids  
 Wright, Thomas D., Newton  
 Wright, Walter N., Rose Hill  
 Wubben, Arthur C., Rock Rapids  
 \*Wurl, Otto A., Council Bluffs  
 Wurtzer, Ezra L., Clear Lake  
 Wyatt, Merlin R., Manning  
 Wyland, Asa O., Underwood (L.M.)  
 Yackley, James V., Denison  
 Yancey, Charles C., Sioux City  
 Yavorsky, George W., Belle Plaine (L.M.)  
 \*Yavorsky, William D., Cedar Rapids  
 Yocum, Albert L., Chariton  
 Yost, Charles G., Center Point  
 Young, Clifford W., Onawa  
 Young, Ernest R., Dubuque  
 Young, Henry C., Bloomfield (L.M.)  
 Young, Howard O., Marion  
 Young, James W., Des Moines  
 Young, Richard A., Des Moines  
 Zaeske, Dora E. K., Charter Oak  
 Zaeske, Edward V., Charter Oak  
 Ziffren, Sidney E., Shanghai, China  
 Zimmerer, Edmund G., Des Moines  
 Zinn, Edgar N., Fort Dodge  
 Zoller, Sherwood B., Fredericksburg  
 Zuercher, Arlo R., Cedar Rapids  
 Zukerman, Cecil M., Davenport

\*Military Service  
 \*Deceased  
 (L.M.) Life Member

# Roster of Iowa Physicians in Military Service

As of June 22, 1946

## Appanoose County

Condon, F. J., Centerville (Owensboro, Ky.)...Major, U.S.P.H.S.

## Benton County

Senfeld, Sidney, Belle Plaipe

## Black Hawk County

Marquis, F. M., Waterloo (Ft. Sam Houston, Tex.)...Capt., A.U.S.

## Boone County

Brewster, E. S., Boone (APO 254, New York, N. Y.)...Major, A.U.S.

## Buena Vista County

Witte, H. J., Marathon (APO 350, New York, N. Y.)...Major, A.U.S.

## Butler County

James, R. A., Allison (Mare Island, Cal.)

## Carroll County

Freedland, Maurice, Coon Rapids  
Seannell, R. C., Carroll (Denver, Colo.)...Capt., A.U.S.

## Cass County

Schiff, Joseph, Anita (Walla Walla, Wash.)...Capt., A.U.S.

## Cerro Gordo County

Fitzpatrick, M. R., Mason City (Ft. Dix, N. J.)...1st Lt., A.U.S.  
Harris, R. H., Mason City (Cando, N. Dak.)...Major, A.U.S.  
†Harrison, G. E., Mason City...Col., A.U.S.  
Mullen, L. M., Mason City (Kansas City, Mo.)...Capt., A.U.S.  
Tice, G. I., Mason City (Mare Island, Cal.)...Lt., U.S.N.R.  
Tice, W. A., Mason City (Jacksonville, Fla.)...Lt. (jg), U.S.N.R.

## Cherokee County

George, L. A., Cherokee...A.U.S.

## Clayton County

Glesne, O. G., Monona (Knoxville, Iowa)...Capt., A.U.S.

## Clinton County

O'Donnell, J. E., Clinton...Lt., U.S.N.R.  
Speigel, I. J., Clinton (Galesburg, Ill.)...Capt., A.U.S.  
Wells, L. E., Clinton...Capt., A.U.S.

## Dallas-Guthrie Counties

Butterfield, E. T., Dallas Center (Springfield, Mo.) Capt., A.U.S.  
Byrnes, A. W., Guthrie Center (Fort Custer, Mich.)...Major, A.U.S.

## Delaware County

Baumgarten, Oscar, Earlville...Capt., A.U.S.

## Des Moines County

Eigenfeld, M. L., Burlington (Cleveland, Ohio)...1st Lt., A.U.S.  
Sage, E. C., Burlington (Fleet PO, San Francisco, Cal.)...Lt. Comdr., U.S.N.R.

## Dubuque County

Anderson, E. E., Dubuque (Bradley Field, Conn.)...Capt., A.U.S.  
Cunningham, J. C., Dubuque (Fairfield, Ohio)...Capt., A.U.S.  
Edstrom, Henry, Dubuque (Galesburg, Ill.)...Lt. Col., A.U.S.  
†Hall, C. B., Dubuque...Capt., A.U.S.  
Knoll, A. H., Dubuque (San Francisco, Cal.)...Major, A.U.S.  
Lavery, H. B., Dubuque (Washington, D. C.)...Lt. Col., A.U.S.  
Leik, D. W., Dubuque (Wichita Falls, Tex.)...Capt., A.U.S.  
Mueller, J. J., Dubuque...Capt., A.U.S.  
Painter, R. C., Dubuque (Cheyenne, Wyo.)...Lt. Comdr., U.S.N.R.

## Fayette County

Walsh, E. L., Hawkeye (Huntington, W. Va.)...A.U.S.  
Walsh, W. E., Hawkeye (Cleveland, Ohio)...Comdr., U.S.N.R.

## Floyd County

Huber, R. H., Charles City...1st Lt., A.U.S.  
Mackie, D. G., Charles City (9660 S. W. Pacific Highway, Portland, Oregon)...Capt., A.U.S.  
Magdsick, Carl, Charles City (Green Cove Springs, Fla.)...Lt., U.S.N.R.

## Franklin County

Hedgecock, L. E., Hampton (Camp Lejeune, N. Car.)...Comdr., U.S.N.R.

## Greene County

Cartwright, F. P., Grand Junction (Colorado Springs, Colo.)...Capt., A.U.S.

## Hamilton County

Mooney, F. P., Jewell...Capt., A.U.S.  
Schrader, M. A., Webster City (Topeka, Kan.)...1st Lt., A.U.S.

## Henry County

Cogan, Samuel, Mt. Pleasant  
Dwankowski, Carl, Mt. Pleasant (APO 511, New York, N. Y.)...Major, A.U.S.  
Ristine, L. P., Mt. Pleasant (Denver, Colo.)...Major, A.U.S.

## Iowa County

Geiger, U. S., North English (Kansas City, Mo.)...Lt. Comdr., U.S.N.R.

## Jackson County

Skelley, P. B., Jr., Maquoketa (APO 247, San Francisco, Cal.)...1st Lt., A.U.S.

## Jefferson County

Frey, Harry, Fairfield (Norfolk, Va.)...Comdr., U.S.N.R.  
Graber, H. E., Fairfield...Lt. Col., A.U.S.  
Taylor, I. C., Fairfield (Washington, D. C.)...1st Lt., A.U.S.

## Johnson County

Albert, S. M., Iowa City...Capt., A.U.S.  
Bunge, R. G., Iowa City...Capt., A.U.S.  
Cobb, E. A., Iowa City (Ft. Sam Houston, Texas)...1st Lt., A.U.S.  
Crowell, E. A., Iowa City (Ft. Geo. Wright, Wash.)...Capt., A.U.S.  
Evers, L. B., Iowa City...1st Lt., A.U.S.  
Flax, Ellis, Iowa City...Lt. (jg), U.S.N.R.  
Francis, N. L., Iowa City (Annapolis, Md.)...Lt. (jg), U.S.N.R.  
Harness, W. M., Iowa City (Hot Springs, Ark.)...A.U.S.  
Hartung, Walter, Iowa City (Springfield, Mo.)...Major, A.U.S.  
Hessin, A. L., Iowa City (APO 469, New York, N. Y.)...Major, A.U.S.  
Keislar, H. D., Iowa City (Washington, D. C.)...Capt., A.U.S.  
Laubscher, J. H., Iowa City (Ft. Benning, Ga.)...1st Lt., A.U.S.  
Moreland, F. B., Iowa City (Maxwell Field, Ala.)...1st Lt., A.U.S.  
Petersen, R. E., Iowa City (Manchester, N. H.)...1st Lt., A.U.S.  
Ringrose, E. J., Iowa City  
Sells, R. L., Jr., Iowa City (Palmdale, Cal.)...Capt., A.U.S.  
†Springer, E. W., Iowa City (APO 678, New York, N. Y.)...Capt., A.U.S.  
Stump, R. B., Iowa City (Denver, Colo.)...Capt., A.U.S.  
Titus, E. L., Iowa City (Los Angeles, Cal.)...Col., A.U.S.  
Trapasso, T. J., Iowa City (APO 520, New York, N. Y.)...Capt., A.U.S.  
Vander Laan, C. A., Iowa City...A.U.S.  
Voelker, C. A., Jr., Iowa City...Capt., A.U.S.  
Weatherly, H. E., Iowa City...Major, A.U.S.  
Weih, J. E., Iowa City...A.U.S.  
Wollmann, W. W., Iowa City (Martinsburg, W. Va.)...Capt., A.U.S.

## Junior Members

†Adams, M. P., Iowa City (Fleet PO, San Francisco, Cal.)...Lt. (jg), U.S.N.R.  
Ahrens, J. H., Iowa City (APO San Francisco, Cal.)...A.U.S.  
Ball, A. L., Iowa City (Camp Polk, La.)...Major, A.U.S.  
Barrent, M. E., Iowa City (Camp Tyson, Tenn.)...Capt., A.U.S.  
Blair, J. D., Iowa City (APO San Francisco, Cal.)...Major, A.U.S.  
Boyd, R. J., Iowa City (Spokane, Wash.)...Capt., A.U.S.  
Brintnall, E. S., Iowa City (APO New York, N. Y.)...Major, A.U.S.  
Burr, S. P., Iowa City (APO San Francisco, Cal.)...1st Lt., A.U.S.  
Couch, O. A., Iowa City (Camp Van Dorn, Miss.)...1st Lt., A.U.S.  
Freiberg, M., Iowa City (Jefferson Barracks, Mo.)...A.U.S.  
Hamilton, H. E., Iowa City (Chicago, Ill.)...1st Lt., A.U.S.  
Hendricks, A. B., Iowa City (Fleet PO, San Francisco, Cal.)...Lt. Comdr., U.S.N.  
Hovis, Wm., Iowa City (Fleet PO, San Francisco, Cal.)...Lt. (jg), U.S.N.R.  
Kaplan, Nathan, Iowa City (Carlisle Barracks, Pa.)...1st Lt., A.U.S.  
Keil, P. G., Iowa City (Sioux City, Iowa)...1st Lt., A.U.S.  
McCann, J. P., Iowa City (Carlisle Barracks, Penn.)...1st Lt., A.U.S.  
Moeb, B. H., Iowa City (APO 755, New York, N. Y.)...Capt., A.U.S.  
Phillips, R. M., Iowa City (San Francisco, Cal.)...1st Lt., A.U.S.  
Randall, R. G., Iowa City (Waterloo, Iowa)...Capt., A.U.S.  
Rosenbusch, M., Iowa City (Fort Leonard Wood, Mo.)...1st Lt., A.U.S.  
Russin, L. A., Iowa City (Fort Blanding, Fla.)...Capt., A.U.S.  
Sawtelle, W. W., Iowa City...Lt., U.S.N.R.  
Shand, J. A., Iowa City (Carlisle Barracks, Penn.)...1st Lt., A.U.S.  
Shapiro, S. I., Iowa City  
Skewis, J. E., Iowa City (Corona, Cal.)...Lt. Comdr., U.S.N.R.  
Watters, V. G., Iowa City (Fort Leonard Wood, Mo.)...1st Lt., A.U.S.  
Wicks, W. J., Iowa City (Camp Crowder, Mo.)...Capt., A.U.S.  
Williams, L. A., Iowa City (Treasure Island, Cal.)...1st Lt., A.U.S.  
Yetter, W. L., Iowa City (APO New York, N. Y.)...Major, A.U.S.  
\*Zahrt, N. E., Iowa City (APO San Francisco, Cal.)...Capt., A.U.S.  
Zimmerman, H. A., Iowa City (Santa Ana, Cal.)...1st Lt., A.U.S.

## Keokuk County

Engelmann, A. T., What Cheer (Camp Polk, La.)...Capt., A.U.S.



**Kossuth County**

Corbin, R. L., Luverne (Des Moines, Iowa).....Capt., A.U.S.

**Lee County**

Younan, Thomas, Ft. Madison.....Capt., A.U.S.

**Linn County**

Coughlan, V. H., Coggon (Fort Snelling, Minn.).....A.U.S.  
 Leedham, C. L., Springville (Hot Springs, Ark.).....Col., A.U.S.  
 †MacDougall, R. F., Cedar Rapids (APO 9057, New York,  
 N. Y.).....Capt., A.U.S.  
 Noble, W. C., Cedar Rapids (Camp San Luis Obispo,  
 Cal.).....1st Lt., A.U.S.  
 Smrha, J. A., Cedar Rapids (Denver, Colo.).....Capt., A.U.S.  
 Yavorsky, W. D., Cedar Rapids (Fleet PO, San Francisco,  
 Cal.).....Comdr., U.S.N.

**Lyon County**

Moriarity, F. J., Rock Rapids (Corvallis, Ore.)....Capt., A.U.S.

**Mahaska County**

Bos, H. C., Oskaloosa.....Major, A.U.S.  
 Gillett, R. M., Oskaloosa (Fleet PO, San Francisco,  
 Cal.).....Capt. U.S.N.

**Marion County**

Gray, J. F., Jr., Melcher (Hattiesburg, Miss.).....Capt., A.U.S.

**Mills County**

Kuitert, J. H., Glenwood (Denver, Colo.).....Major, A.U.S.

**Mitchell County**

Owen, W. E., Osage (San Diego, Cal.).....Lt., U.S.N.

**Monona County**

†Harlan, M. E., Onawa (Fleet PO, San Francisco,  
 Cal.).....Lt. (jg), U.S.N.R.

**Monroe County**

Bay, F. N., Albia.....Lt. Comdr., U.S.N.R.  
 Gilliland, C. H., Albia (Fleet PO, San Francisco,  
 Cal.).....Lt. Comdr., U.S.N.  
 Morrissey, W. J., Lovilia (Tacoma, Wash.).....1st Lt., A.U.S.

**Montgomery County**

Panzer, E. J. C., Stanton (Point Montara, Cal.)....Lt., U.S.N.R.

**Muscatine County**

Kimball, J. E., Jr., West Liberty.....Major, A.U.S.  
 Norem, Walter, Muscatine (APO, Miami, Fla.).....Capt., A.U.S.

**Page County**

Bauer, Frank, Shenandoah (APO New York, N. Y.).....A.U.S.  
 Brush, Frederick, Shenandoah (APO New York, N. Y.).....A.U.S.  
 Burdick, F. D., Shenandoah (Denver, Colo.).....Major, A.U.S.  
 Schwidde, Tilford, Shenandoah (APO New York, N. Y.).....A.U.S.

**Polk County**

Bender, H. R., Des Moines (Carlisle Barracks,  
 Penn.).....1st Lt., A.U.S.  
 Bruner, J. M., Des Moines.....Lt. Col., A.U.S.  
 Ervin, L. J., Des Moines.....Lt. Col., A.U.S.  
 Fleck, W. L., Des Moines (Ft. Howard, Md.).....Lt. Col., A.U.S.  
 Fried, David, Des Moines (Carlisle Barracks,  
 Penn.).....1st Lt., A.U.S.  
 Fracasse, John, Des Moines.....1st Lt., A.U.S.  
 Gerchek, E. W., Des Moines.....U.S.P.H.S.  
 Harris, H. L., Des Moines (Salina, Kan.).....Capt., A.U.S.  
 Kirch, W. A. W., Des Moines (Astoria, Ore.).....Lt. Comdr., U.S.N.R.  
 La Tona, Salvatore, Des Moines.....1st Lt., A.U.S.  
 Lederman, James, Des Moines.....1st Lt., R.C.A.  
 Levin, S. L., Des Moines (Des Moines, Iowa).....Major, A.U.S.  
 Losh, C. W., Jr., Des Moines.....Capt., A.U.S.  
 Maguire, L. M., Des Moines (Des Moines, Iowa).....Lt. Col., A.U.S.  
 Maloney, P. J., Des Moines.....Capt., A.U.S.  
 Martin, L. E., Des Moines (Helena, Ark.).....1st Lt., A.U.S.  
 Mencher, E. W., Des Moines.....1st Lt., A.U.S.  
 Montgomery, S. A., Des Moines (Carlisle Barracks,  
 Pa.).....Capt., A.U.S.  
 †Morden, R. P., Des Moines (APO 635, New York,  
 N. Y.).....Capt., A.U.S.  
 Mumma, C. S., Des Moines (Los Angeles, Cal.).....Major, A.U.S.  
 Nourse, M. H., Des Moines (Fleet PO, New York,  
 N. Y.).....Lt. Comdr., U.S.N.  
 Patton, B. W., Des Moines (Camp Robinson,  
 Ark.).....1st Lt., A.U.S.  
 Schlaser, V. L., Des Moines (Fleet PO, New  
 York, N. Y.).....Lt. Comdr., U.S.N.  
 Singer, P. L., Des Moines (Camp Grant, Ill.).....1st Lt., A.U.S.  
 \*Snodgrass, R. W., Des Moines (APO 9528, New York,  
 N. Y.).....Capt., A.U.S.  
 Stitt, P. L., Des Moines (Seattle, Wash.).....Lt. (jg), U.S.N.R.  
 Updegraff, Thomas, Des Moines (APO San Fran-  
 cisco, Cal.).....Capt., A.U.S.  
 Van Hale, L. A., Des Moines (Denver, Colo.).....Major, A.U.S.

**Pottawattamie County**

Kurth, C. J., Council Bluffs (Wichita, Kan.).....Major, A.U.S.  
 Mathiasen, J. W., Council Bluffs (APO 239,  
 San Francisco, Cal.).....Capt., A.U.S.  
 Wurl, O. A., Council Bluffs (New Orleans, La.).....Lt. Col., A.U.S.

**Scott County**

†Baker, R. W., Davenport (APO 511, New York,  
 N. Y.).....Capt., A.U.S.  
 Boyer, U. S., Davenport (Rock Island, Ill.).....Lt. Col., A.U.S.  
 Carey, E. T., Davenport.....1st Lt., A.U.S.  
 Coleman, Tom, Davenport (APO 230, New York,  
 N. Y.).....Capt., A.U.S.  
 Hurteau, Everett, Davenport (APO 647, New York,  
 N. Y.).....Capt., A.U.S.  
 Hurteau, W. W., Davenport (Camp Barkeley,  
 Texas).....Major, A.U.S.  
 Krakauer, Max, Davenport.....Major, A.U.S.  
 Kuhl, A. B., Jr., Davenport (Ft. Meade, Md.).....Major, A.U.S.  
 Perkins, R. M., Davenport (APO 121B, New York,  
 N. Y.).....Capt., A.U.S.  
 Rendleman, Hugh, Davenport (Fleet PO, San  
 Francisco, Cal.).....Lt. (jg), U.S.N.R.  
 Sheeler, I. H., Davenport (APO 350, New York,  
 N. Y.).....Capt., A.U.S.

**Sioux County**

Gleysteen, R. R., Alton (Palo Alto, Cal.).....Comdr., U.S.N.  
 Oelrich, C. D., Sioux Center (Buckley Field, Colo.)..Capt., A.U.S.

**Wapello County**

Brentan, Emanuel, Ottumwa (Camp Carson, Colo.)..Capt., A.U.S.  
 Howell, H. P., Ottumwa (Oakland, Cal.).....Major, A.U.S.  
 Struble, G. C., Ottumwa (Cleveland, Ohio).....Lt. Col., A.U.S.

**Washington County**

Boice, C. L., Washington (Oakland, Cal.).....Lt. Comdr., U.S.N.  
 Droz, A. K., Washington (Long Beach, Cal.).....Comdr., U.S.N.R.  
 Stutman, R. E., Washington (Patuxent River,  
 Md.).....Lt., U.S.N.R.

**Webster County**

Burleson, M. W., Fort Dodge (Pasadena, Cal.).....Capt., A.U.S.  
 †Thatcher, O. D., Fort Dodge (APO 634, New York,  
 N. Y.).....Capt., A.U.S.

**Woodbury County**

Cowan, J. A., Sioux City (Lansing, Mich.).....Major, U.S.P.H.S.  
 Crowder, R. E., Sioux City (Kansas City,  
 Mo.).....Lt. Comdr., U.S.N.R.  
 Knott, P. D., Sioux City.....Capt., A.U.S.  
 Simonsen, Marie N., Sioux City (Philadelphia, Pa.)..Lt., U.S.N.R.

**Wright County**

Doles, E. A., Clarion (Spokane, Wash.).....Capt., A.U.S.

(\*) Reported missing in action.  
 (†) Reported deceased in service.  
 (‡) Reported prisoner of war.

**MORBIDITY REPORT**

Disease	May '46	Apr. '46	May '45	Most Cases Reported From
Diphtheria	21	20	9	Clinton, Cerro Gordo, Clay
Scarlet Fever	267	210	171	Polk, Woodbury, Linn
Typhoid Fever	6	23*	0	Scott, Dubuque, Johnson
Smallpox	4	2	0	Pocahontas, Black Hawk
Measles	1520	702	303	Boone, Bremer, Dallas
Whooping Cough	139	66	18	Dubuque, Linn, Johnson
Brucellosis	16	8	10	Clinton, Dubuque, Sioux
Chickenpox	268	162	275	Woodbury, Dubuque, Palo Alto
German Measles	7	12	6	Clinton, Guthrie, Calhoun
Influenza	0	0	0	
Malaria	31	29	181	Polk, Black Hawk, Woodbury
Meningitis				Fayette, Allamakee, Cerro Gordo
Meningococcus	7	5	7	Des Moines, Clinton, Story
Mumps	217	244	505	Dallas, Black Hawk, Lee
Pneumonia	14	12	10	Linn, Delaware, Des Moines
Polioomyelitis	8	2	1	For the state
Tuberculosis	89	59	83	For the state
Gonorrhea	187	225	250	For the state
Syphilis	126	154	104	For the state

\*21 of the 23 cases are delayed reports.

## COUNTY MEDICAL SOCIETY OFFICERS

COUNTY	PRESIDENT	SECRETARY	DEPUTY COUNCILOR
Adair.....	A. J. Gantz, Greenfield.....	A. S. Bowers, Orient.....	A. S. Bowers, Orient
Adams.....	A. W. Brunk, Prescott.....	J. H. Wallahan, Corning.....	A. W. Brunk, Prescott
Allamakee.....	J. W. Myers, Postville.....	J. W. Thornton, Lansing.....	J. W. Thornton, Lansing
Appanoose.....	N. W. Labagh, Mystic.....	C. F. Brummitt, Centerville.....	E. A. Larsen, Centerville
Audubon.....	R. H. Payne, Exira.....	W. H. Halloran, Audubon.....	L. E. Jensen, Audubon
Benton.....	N. B. Williams, Belle Plaine.....	D. A. Dutton, Van Horne.....	N. B. Williams, Belle Plaine
Black Hawk.....	B. C. Boston, Waterloo.....	C. A. Waterbury, Jr., Waterloo.....	A. J. Joynt, Waterloo
Boone.....	A. B. Deering, Boone.....	B. T. Whitaker, Boone.....	J. O. Ganoe, Ogden
Bremer.....	H. W. Rathe, Waverly.....	M. N. Gernsey, Waverly.....	F. R. Sparks, Waverly
Buchanan.....	R. L. Knifer, Jesup.....	J. F. Loeck, Independence.....	J. W. Barrett, Jr., Independence
Buena Vista.....	F. C. Foley, Newell.....	T. R. Campbell, Sioux Rapids.....	H. E. Farnsworth, Storm Lake
Butler.....	F. O. Rolfs, Parkersburg.....	F. F. McKean, Allison.....	Bruce Ensley, Shell Rock
Calhoun.....	P. W. Van Metre, Rockwell City.....	J. H. Faust, Manson.....	
Carroll.....	W. A. Anneberg, Carroll.....	J. R. Morrison, Carroll.....	W. L. McConkie, Carroll
Cass.....	R. M. Needles, Atlantic.....	W. F. Giegerich, Atlantic.....	
Cedar.....	Fred Montz, Lowden.....	J. E. Smith, Clarence.....	P. M. Hoffman, Tipton
Cerro Gordo.....	A. B. Phillips, Clear Lake.....	D. L. Long, Mason City.....	G. J. Sartor, Mason City
Cherokee.....	M. F. Joynt, Marcus.....	D. C. Koser, Cherokee.....	C. H. Johnson, Cherokee
Chickasaw.....	J. M. Kerwick, New Hampton.....	J. E. Murtaugh, New Hampton.....	P. E. Gardner, New Hampton
Clarke.....	F. S. Bowen, Woodburn.....	C. R. Harken, Osceola.....	H. E. Stroy, Osceola
Clay.....	E. E. Munger, Jr., Spencer.....	C. C. Colleser, Spencer.....	C. C. Colleser, Spencer
Clayton.....	P. R. V. Hommel, Elkader.....	T. W. Lichter, Edgewood.....	P. R. V. Hommel, Elkader
Clinton.....	R. T. Lenaghan, Clinton.....	Elsie R. Carrington, Clinton.....	R. F. Luse, Clinton
Crawford.....	E. V. Zaeske, Charter Oak.....	Dora E. K. Zaeske, Charter Oak.....	C. L. Sievers, Denison
Dallas-Guthrie.....	W. R. Van Duzer, Casey.....	S. J. Brown, Panora.....	E. J. Butterfield, Dallas Center
			S. J. Brown, Panora
Davis.....	C. H. Cronk, Bloomfield.....	H. C. Young, Bloomfield.....	C. H. Cronk, Bloomfield
Decatur.....	E. E. Gamet, Lamoni.....	W. N. Doss, Leon.....	F. A. Bowman, Leon
Delaware.....	B. H. Byers, Manchester.....	W. J. Willett, Manchester.....	J. K. Stepp, Manchester
Des Moines.....	J. C. McKitterick, Burlington.....	R. H. Crawford, Burlington.....	F. G. Ober, Burlington
Dickinson.....	F. L. Roberts, Spirit Lake.....	Ruth F. Wolcott, Spirit Lake.....	T. L. Ward, Arnolds Park
Dubuque.....	A. J. Entringer, Dubuque.....	D. C. Sharpe, Dubuque.....	J. C. Painter, Dubuque
Emmett.....	S. C. Kirkegaard, Estherville.....	L. W. Loving, Estherville.....	S. C. Kirkegaard, Estherville
Fayette.....	J. P. Gallagher, Oelwein.....	A. F. Grandinetti, Oelwein.....	C. C. Hall, Maynard
Floyd.....	C. H. Cords, Rudd.....		R. A. Fox, Charles City
Franklin.....	J. C. Powers, Hampton.....	F. L. Siberts, Hampton.....	J. C. Powers, Hampton
Fremont.....	Ralph Lovelady, Sidney.....	A. E. Wanamaker, Hamburg.....	A. E. Wanamaker, Hamburg
Greene.....	L. C. Nelson, Jefferson.....	J. R. Black, Jefferson.....	L. C. Nelson, Jefferson
Grundy.....	C. H. Bartruff, Reinbeck.....	G. A. Biebesheimer, Reinbeck.....	W. O. McDowell, Grundy Center
Hamilton.....	R. C. Crumpton, Webster City.....	M. B. Galloway, Webster City.....	M. B. Galloway, Webster City
Hancock-Winnebagos.....	C. V. Hamilton, Garner.....	W. F. Missman, Klemme.....	C. V. Hamilton, Garner
			G. F. Dolmage, Buffalo Center
			F. N. Cole, Iowa Falls
Hardin.....	W. H. Van Tiger, Eldora.....	F. N. Cole, Iowa Falls.....	F. N. Cole, Iowa Falls
Harrison.....	R. H. Cutler, Little Sioux.....	F. H. Hanson, Magnolia.....	
Henry.....	J. S. Jackson, Mt. Pleasant.....	B. B. Gloeckler, Mt. Pleasant.....	S. W. Huston, Mt. Pleasant
Howard.....	W. C. Hess, Cresco.....	Abner Buresh, Lime Springs.....	W. A. Bockoven, Cresco
Humboldt.....	T. G. Herrick, Gilmore City.....	A. S. Arent, Humboldt.....	I. T. Schultz, Humboldt
Ida.....	M. W. Grubb, Galva.....	W. P. Crane, Holstein.....	E. S. Parker, Ida Grove
Iowa.....	F. C. Schadt, Williamsburg.....	I. J. Sinn, Williamsburg.....	I. J. Sinn, Williamsburg
Jackson.....	E. V. Andrew, Maquoketa.....	J. J. Tilton, Bellevue.....	F. J. Swift, Maquoketa
Jasper.....	L. P. Adams, Newton.....	T. D. Wright, Newton.....	R. W. Wood, Newton
Jefferson.....	R. A. McGuire, Fairfield.....	I. N. Crow, Fairfield.....	I. N. Crow, Fairfield
Johnson.....	E. W. Paulus, Iowa City.....	R. H. Flocks, Iowa City.....	G. C. Albright, Iowa City
Jones.....	J. D. Paul, Anamosa.....	C. R. Smith, Wyoming.....	T. M. Redmond, Monticello
Keokuk.....	J. L. Doyle, Sigourney.....	John Maxwell, What Cheer.....	D. L. Grothaus, Delta
Kossuth.....	P. V. Janse, Algona.....	M. G. Bourne, Algona.....	J. G. Clapsaddle, Burt
Lee.....	J. R. Rankin, Keokuk.....	B. D. Van Werden, Keokuk.....	R. L. Feightner, Ft. Madison
			G. H. Ashline, Keokuk
Linn.....	M. J. Foster, Cedar Rapids.....	L. J. Halpin, Cedar Rapids.....	B. F. Wolverton, Cedar Rapids
Louisia.....	J. W. Pence, Columbus Junction.....	L. E. Weber, Wapello.....	J. H. Chittum, Wapello
Lucas.....	A. L. Yocom, Jr., Chariton.....	R. E. Anderson, Chariton.....	S. L. Throckmorton, Chariton
Lyon.....		J. H. Sherlock, Rock Rapids.....	
Madison.....	H. E. Carver, Earlham.....	E. M. Olson, Winterset.....	C. B. Hickenlooper, Winterset
Mahaska.....	G. W. Bennett, Oskaloosa.....	W. V. Campbell, Oskaloosa.....	E. B. Wilcox, Oskaloosa
Marion.....	V. J. Elliott, Knoxville.....	D. A. Mater, Knoxville.....	H. L. Bridgeman, Knoxville
Marshall.....	J. E. Sinning, Marshalltown.....	O. D. Wolfe, Marshalltown.....	A. D. Woods, State Center
Mills.....	W. A. DeYoung, Glenwood.....	T. E. Shonka, Malvern.....	D. W. Harman, Glenwood
Mitchell.....	M. O. Eiel, Osage.....	R. L. Whitley, Osage.....	T. S. Walker, Riceville
Monona.....	E. J. Liska, Ute.....	E. E. Gingles, Onawa.....	C. W. Young, Onawa
Monroe.....	H. J. Richter, Albion.....	T. A. Moran, Melrose.....	C. C. Fowler, Lovilia
Montgomery.....	L. R. Moriarty, Villisca.....	Helge Borre, Red Oak.....	Oscar Alden, Red Oak
Muscatine.....	J. L. Klein, Jr., Muscatine.....	K. E. Wilcox, Muscatine.....	T. F. Beveridge, Muscatine
O'Brien.....	W. W. Hayne, Paullina.....	W. S. Balkema, Sheldon.....	W. R. Brock, Sheldon
Osceola.....	E. S. Aeltis, Sibley.....	Frank Rizzo, Sibley.....	Frank Reinsch, Ashton
Page.....	H. McK. Bunch, Shenandoah.....	J. F. Aldrich, Shenandoah.....	W. H. Maloy, Shenandoah
Palo Alto.....	J. W. Woodbridge, Emmetsburg.....	P. O. Nelson, Emmetsburg.....	H. L. Brereton, Emmetsburg
Plymouth.....	M. J. Joynt, Le Mars.....	L. C. O'Toole, Le Mars.....	W. L. Downing, Le Mars
Pocahontas.....	W. F. Brinkman, Pocahontas.....	C. L. Jones, Gilmore City.....	C. L. Jones, Gilmore City
Polk.....	M. I. Olsen, Des Moines.....	E. W. Anderson, Des Moines.....	J. B. Synhorst, Des Moines
Pottawattamie.....	F. E. Marsh, Council Bluffs.....	G. V. Caughlan, Council Bluffs.....	G. N. Best, Council Bluffs
Poweshiek.....	C. Parsons, Grinnell.....	C. E. Harris, Grinnell.....	C. E. Harris, Grinnell
Ringgold.....	O. L. Fullerton, Redding.....	J. W. Hill, Mt. Airy.....	E. J. Watson, Diagonal
Sac.....	W. I. Evans, Sac City.....	D. Gibson, Sac City.....	J. R. Dewey, Schaller
Scott.....	W. C. Goenne, Davenport.....	J. H. Sunderbruch, Davenport.....	A. P. Donohoe, Davenport
Shelby.....	Carl V. Bisgard, Harlan.....	A. L. Nielson, Harlan.....	A. L. Nielson, Harlan
Sioux.....	E. B. Grossmann, Orange City.....	C. B. Murphy, Alton.....	Wm. Doornink, Orange City
Story.....	L. E. Rosebrook, Ames.....	W. B. Armstrong, Ames.....	Bush Houston, Nevada
Tama.....	A. J. Wentzien, Tama.....	J. Havlik, Tama.....	A. A. Pace, Toledo
Taylor.....	W. H. Cash, Lenox.....	J. H. Gasson, Bedford.....	G. W. Rimmel, Bedford
Union.....	J. A. Liken, Creston.....	C. E. Sampson, Creston.....	C. C. Rambo, Creston
Van Buren.....		L. A. Coffin, Farmington.....	L. A. Coffin, Farmington
Wapello.....	R. O. Hughes, Ottumwa.....	L. A. Taylor, Ottumwa.....	C. A. Henry, Farson
Warren.....	M. B. Cunningham, Norwalk.....	C. H. Mitchell, Indianola.....	C. H. Mitchell, Indianola
Washington.....	E. D. Miller, Wellman.....	W. S. Kyle, Washington.....	E. D. Miller, Wellman
Wayne.....	D. R. Ingraham, Sewal.....	C. F. Brubaker, Corydon.....	J. H. McCall, Allerton
Webster.....	C. J. Baker, Fort Dodge.....	W. C. Thatcher, Fort Dodge.....	H. E. Nelson, Dayton
Winnebago.....	R. N. Svendsen, Decorah.....	H. H. Ennis, Decorah.....	L. C. Kuhn, Decorah
Woodbury.....	C. R. Watkin, Sioux City.....	R. C. Mugan, Sioux City.....	D. B. Blume, Sioux City
Worth.....	B. H. Osten, Northwood.....	M. P. Allison, Northwood.....	S. S. Westly, Manly
Wright.....	L. D. MacNaughton, Eagle Grove.....	J. R. Christensen, Eagle Grove.....	J. H. Sams, Clarion



# WOMAN'S AUXILIARY NEWS

MRS. KEITH M. CHAPLER, *Chairman of Press and Publicity Committee*, Dexter, Iowa

*President*—MRS. MARION H. BRINKER, Jefferson

*President-Elect*—MRS. FRED MOORE, Des Moines

*Secretary*—MRS. CHARLES A. NICOLL, Panora

*Treasurer*—MRS. HENRY G. DECKER, Des Moines

## IN MEMORIAM

I know my inability to speak, for words half reveal the thoughts which lie concealed within our hearts today. This memorial occasion is for us all one of sacred memory. There are those whom we have called our own, those whom we have loved and known, whose living presence we no longer see, and our hearts are lonely.

In 1922, twenty-four years ago, the national auxiliary was formed during the meeting of the American Medical Association in St. Louis. The history of the first decade of the Auxiliary to the American Medical Association is a story of courageous pioneering in the face of countless difficulties. The pioneering days are over and the pioneers are going. History has been written and will be lived in the future.

Seven years later, in 1929, the Iowa State Auxiliary was organized—a group of women bound together with a lacing and interlacing of duties, responsibilities, and privileges. Each one felt that in meeting together once a year and comparing her problems with others in the same sphere of activity a greater happiness could be achieved, with the knowledge that work in the auxiliary makes for harmony in the home and draws the family closer together.

It is certainly fitting and proper that we should set aside a brief moment in order that we, the living, may pay a just and loving tribute to those of our members who have gone on.

We say of our beloved dead, as Shelley said of his, "They are not dead, death is but a low mist which cannot blot the brightness it may veil. They have but out-soared the shadow of our night. They are secure from the contagion of the world's slow stain. They are one with nature, their voices we may hear in the music of the wind, the sea and the night's sweet bird, their tears are in the falling rain. Their presence is felt and known in darkness and in light, from herb and stone their souls like stars are beacons from the abode where the Eternal are."

They are not dead, for death cannot kill that which never dies. Character survives, goodness lives, and influence is immortal.

A memorial service should engrave on our consciousness the will to make today worth-while, to warn us that the only sting of death is life's purpose unfilled.

"The record of a generous life runs like a vine

around the memory of our dead, and every sweet unselfish act is now a perfumed flower."

Josephine Gregoire McNamara died December 8, 1945. She was the wife of the late Dr. F. P. McNamara, pathologist of the Finley Hospital in Dubuque and past president of Iowa State Medical Society. Her friends say of her, "She worked to bring well being to those she loved." She is remembered by her works.

Mrs. B. B. Bridge of Albert City—Both Dr. and Mrs. Bridge lost their lives in an automobile accident in February. She was highly respected and loved in her community. She was a charter member of the Auxiliary and was chaplain in the Eastern Star for ten years.

Florence Head Dean—For many years she was an interested member in Jefferson. She had a strong sense of fairness and loyalty and will be missed by her many friends.

Mrs. John H. Shipley—She was a member at Rippey, Iowa. Her greatest interest was in her home and family. She liked people and many will remember her as a good friend.

Mrs. D. W. Finlayson died December 15, 1945. She was a lady of sterling qualities. She loved people and continued to be a tireless worker in her church as long as her health permitted. She will be remembered as a woman with a high sense of honor and noble unselfishness, always a lady.

Margaret Turner Smith died December 12, 1945. Since the beginning she was interested in auxiliary work. She was our third state president and this year chairman of our revisions committee.

She won for herself a large place in our hearts, with her cheery smile and cordial greeting. Criticism and fault-finding were foreign to her nature. She was always interested in civic activities, serving for several years on the school board, and giving of her strength to Drake University. The football boys called her mother.

Her friends say of her, "She was the salt of the earth," and she will be greatly missed.

Margaret Carryer died March 19, 1946. She was a tireless worker in the Polk County Auxiliary. She loved to sew at the hospitals and attended whenever possible. She was always quiet and unassuming, loved people, and had a warm understanding of them. Her memory will be a rich heritage. She learned to play the harp of life with sweet music.

## RESOLUTIONS

April 18, 1946

Whereas, the Woman's Auxiliary to the Iowa State Medical Society in convention has been the recipient of many courtesies;

Be it resolved, that the Woman's Auxiliary expresses its appreciation to those who have extended their hospitality to us, to the following chairmen and their committees: Mrs. H. I. McPherrin, chairman, and Mrs. Charles Ryan, co-chairman of the convention committee; Mrs. McPherrin as luncheon reservation chairman, and Mrs. Ryan as decoration chairman; Mrs. George Watters, president of the Polk County Auxiliary and chairman of local publicity; and

Be it further resolved, that appreciation be expressed to Dr. R. D. Bernard, President of the Iowa State Medical Society; to Dr. R. L. Parker, President-Elect of the Iowa State Medical Society; to Dr. E. A. Hanske, Dr. F. W. Mulsow, and Dr. Ralph Lovelady in their capacity as Advisory Council to the Woman's Auxiliary; to Miss Mary McCord of the office staff of the Iowa State Medical Society; to the Board of Trustees for their financial support; to our speakers, Mrs. Dorothy Phillips, Dr. Robert Parker, and Mrs. C. V. McCarthy; to the press for its courtesy and consideration; to our president, Mrs. S. S. Westly, who has served so loyally and conscientiously during the past year; and to all those unidentified persons whose thoughtfulness has made our convention a success.—Mrs. K. M. Chapler, Secretary.

## ANNUAL REPORT OF THE COMMITTEE ON LEGISLATION

This has not been a legislative year in Iowa; therefore the Legislative Committee sought to keep the members informed on the current and proposed medical legislation in Congress.

Four bulletins were mailed to the members explaining the Wagner-Murray bill and other health measures.

The chairman arranged four club programs on the proposed state prepaid medical insurance plan.

Mrs. J. A. Downing, Chairman

## REPORT OF HYGEIA SUBSCRIPTIONS FOR 1945

Several county Auxiliaries did not respond to the request for a report on subscriptions to *Hygeia* Magazine. Following is a report of the counties and their subscription credits:

Buena Vista .....	15
Butler .....	15
Dallas-Guthrie .....	50 6/12
Dubuque .....	20
Polk .....	56
Worth .....	3 2/12
Total .....	159 2/3

Thirty-nine letters were written to all presidents of the county Auxiliaries and to some of the *Hygeia*

chairmen and to state and national officers. Sixteen post cards were sent out.

The Dallas-Guthrie Auxiliary received honorable mention in the national *Hygeia* contest.

Mrs. E. J. Butterfield, Chairman

## ANNUAL REPORT OF PUBLIC RELATIONS COMMITTEE

On accepting the chairmanship of Public Relations, I determined to pursue the problem of cancer control in Iowa, not only because of Mrs. Westly's own admirable work as vice-commander of the Women's Field Army, but also because of my own convictions that it is high time Iowa become informed in regard to the national project of the American Cancer Society to bring knowledge to all our people about the disease that takes so many lives before their life expectancy. I was especially concerned that my own county, Polk, which had never been organized under the Women's Field Army, should become so under the Field Army of the American Cancer Society. I am happy to report that Mrs. Mary Finch, wife of Dr. George H. Finch of Des Moines, accepted the chairmanship for Polk County.

Fall and spring letters were addressed to Auxiliary presidents and to members of the Public Relations Committee, several of whom reported in return to me. For their cooperation, I thank them.

Mrs. D. J. Glomset, Chairman

## ANNUAL REPORT OF PRESS AND PUBLICITY

As Press chairman, we have conducted the "Woman's Auxiliary News" for the fourth year. We have used county and state reports, excerpts from *Hygeia*, the *Bulletin*, and many other approved sources in the hope of passing on information of various denominations which might be stimulating and useful to doctors' wives. In this capacity we have written 75 letters.

The "Woman's Auxiliary News" is the consistent link between all Auxiliary members in the state. Therefore, we urge each county president to see that her press chairman or secretary sends accounts of meetings to the State Chairman not later than the twelfth of the month.

We wish to express our personal gratitude to all state officers, chairmen, and Mrs. Dorothy Dolk of the State Office, who have cooperated so loyally in making our publicity possible.

Mrs. K. M. Chapler, Chairman

## SPEAKERS BUREAU RADIO SCHEDULE

WOI—Wednesdays at 2:45 p. m.

WSUI—Thursdays at 9:30 a. m.

July 3-4	Poliomyelitis	George J. Klok, M.D.
July 10-11	Asthma	Lewis E. January, M.D.
July 17-18	Trichinosis	Frank H. McClurg, M.D.
July 24-25	Hobbies for Health	
		Donald L. Cross, M.D.
July 31-August 1	Rabies	
		Frank J. Anderson, M.D.



# HISTORY OF MEDICINE IN IOWA

*Edited by the Historical Committee*

DR. WALTER L. BIERRING, Des Moines, Chairman

DR. HENRY G. LANGWORTHY, Dubuque, *Secretary* DR. CHARLES L. JONES, Gilmore City

DR. CLYDE A. HENRY, Farson

DR. LESTER C. KERN, Waverly

## MAURICE CHARLES HENNESSY, M. D.

1891-1946

### A Tribute

The many friends, including the members of the Iowa State Medical Society, mourn the death of Maurice Charles Hennessy, M.D., at University Hospital, Iowa City, June 7, 1946, which resulted from cardiac decompensation.

His years of service as a councilor, as a trustee, and as president of the Iowa State Medical Society, made him well known. He gave to each of these positions intelligent and wholehearted attention.

Dr. Hennessy was born at Iowa City, Iowa, on April 19, 1891. He attended public schools and high school at Iowa City and entered the University of Iowa College of Medicine, where he studied until the completion of his junior year. He then transferred to the University of Illinois College of Medicine in Chicago for his senior year, graduating in 1913. After serving an internship at Mercy Hospital, Davenport, Iowa, he joined his brother, Albert V. Hennessy, in the practice of medicine in Council Bluffs. He entered the army in 1917 as a First Lieutenant in the Medical Corps and that service included a tour of duty in England. On his separation from the service, he returned to Council Bluffs and practiced there until his death.

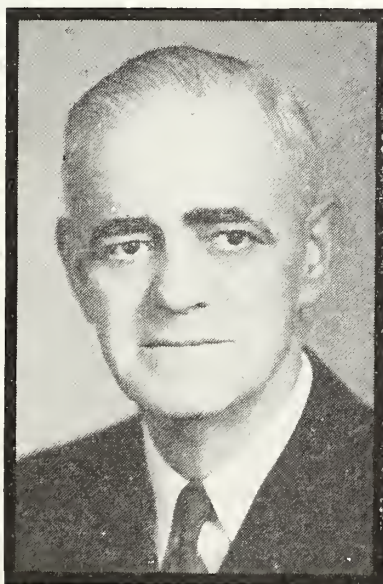
He was married to Ruth Banks on June 25, 1919, and to them four daughters were born. The oldest has chosen medicine as her profession.

Dr. Hennessy was always active in organized medicine. He served as councilor for the Eleventh

District for several terms, and was always in close touch with the counties in his district, knowing their problems intimately. He served several years on the Medical Economics Committee of the State Society, working always for the best medical care of the indigent but insisting on fair compensation

for doctors rendering the service. His knowledge of medical economics was always apparent.

For many years, Dr. Hennessy was a member of the Cancer Committee of the Iowa State Medical Society, serving as chairman of the state cancer drive for one year. He gave many lectures on the prevention and treatment of cancer to various groups and prior to his last illness, he made a number of talks to lay organizations against socialized medicine. These talks were particularly valuable because Dr. Hennessy possessed the ability to talk simply and clearly and thus was able to influence his hearers against government encroachment on his profession. His work for this is outstanding, for he was energetic and enthusiastic. During



MAURICE C. HENNESSY, M.D.

his term as president, he did a great deal of work and his address entitled "One Man's Opinion" which he delivered to the delegates at the close of his term paved the way for a number of needed reforms in the House of Delegates organization. Neither did he ignore civic problems, for some years ago, feeling that the schools in Council Bluffs had drifted from what he considered the essentials of education, he entered

himself as a candidate for the school board and was elected. During his one term, he was very active and made a constructive contribution to the conduct of the schools.

Professionally, Dr. M. C., as he was known to his patients and friends, maintained the highest integrity. He was uncompromising in this and vehement in his denunciation of those individuals who did not practice and conform to ethical medicine. One of his most outstanding qualities was his devotion to his home, for he had no hobbies, spending all of his free time with his family.

He served as president and as a member of the board of censors of Pottawattamie County

Medical Society. Dr. Hennessy was also a former president of the Mercy Hospital staff and served many years as a member of the executive committee of that organization. He did much to secure recognition of the two local hospitals and was vigorous in seeing that standardization of these institutions was maintained. He was a member of the American College of Surgeons, International College of Surgeons, and Iowa Clinical Surgical Society.

In his death, Council Bluffs and Iowa have lost a fine citizen; the medical profession a strong, courageous and rigidly honest leader; and his family, a devoted husband and father.

—Gerald V. Caughlan, M.D.

## Medical History of Wapello County

CLYDE A. HENRY, M.D., Farson

(Conclusion)

(Editor's Note: Biographic sketches omitted from section on "Later Prominent Physicians," Part IV.)

*Dr. Charles Griggsby Lewis* was born in Urbana, Ohio, October 25, 1832. In 1839 the family moved to Illinois, and in 1840 came to Iowa, settling at Keosauqua. Eleven years later they moved to Libertyville, Iowa, to make their future home.

Young Lewis attended the common schools in Van Buren County, the Academy at Keosauqua, and the Medical Department of the State University of Iowa, located at that time in Keokuk. He had previously read medicine under the preceptorship of Dr. Peter Walker. In 1859, the year of his graduation, he located in Libertyville, Iowa. He was married July 18, 1861, to Miss Maria Walker, who died a year later.

During the Civil War, he served as assistant surgeon of the Thirtieth Iowa Infantry, but was compelled to resign his commission before the end of the war because of physical disability. He located in Ottumwa in 1866, where he engaged successfully in the practice of his profession until a few months before his death, when a complication of diseases forced him to retire. He died May 8, 1900, at his home in Ottumwa.

On September 10, 1868, Dr. Lewis married Miss Anna Harrison Ball, daughter of the late Honorable Joseph Ball of Jefferson County. There were two sons by this marriage, Fred A. and Charles B., who were both prominent in the field of dentistry. Dr. Charles B. Lewis was also a graduate in medicine.

At a called meeting of the Wapello County Medical Society, May 9, 1900, the following Resolution of Respect was adopted:

"Dr. C. G. Lewis is dead. In him the profession loses one of its oldest members. Forty years, in summer and winter, day and night, he has labored successfully and faithfully. Generous and benovolent, even to a fault, to all men, he was the upright and high-toned gentleman in his relations to his professional brethren. Few men exhibited through so long a professional career the kindly manner, benevolent disposition, and honest action of Dr. C. G. Lewis. He enjoyed the confidence of a large number of the people of this city. His success as a physician was excellent, and to those of us who enjoyed his friendship for the last forty years, it is a pleasure to remember him as a physician.

"Resolved, That in the death of Dr. C. G. Lewis, Ottumwa loses a good citizen and the medical profession a most useful member."

A. O. Williams, M.D.

D. A. La Force, M.D.

W. D. Searle, M.D.

Resolutions Committee.

*Dr. Charles B. Lewis* was born February 6, 1875, the youngest son of Dr. C. G. and Anna (Ball) Lewis of Ottumwa, Iowa. He received his early education in the city schools of Ottumwa. After graduating from the Ottumwa High School, he entered the Dental Department of the State University of Iowa, graduating with the degree of D.D.S. in June, 1896. In September he returned to the University as an instructor in the Dental Department, matriculating as a student in the Medical Department. He received the M.D. degree in 1900, a member of the first four-year class to be graduated from the Medical Department of the University.

In 1901 he became part owner of the Des



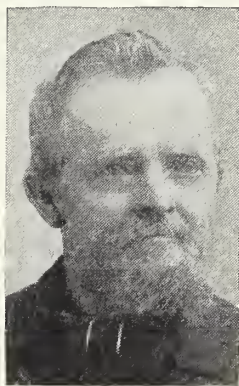
Moines Dental College, which operated as an affiliated department of Drake University. In 1904 he returned to Ottumwa and engaged in the practice of dentistry until July, 1939.

He was a life member of the State Dental and National Dental Associations; and, although he did not practice medicine, he maintained a membership in the Wapello County Medical Society for many years. He was also a member of the Kiwanis Club and the B.P.O.E.

Dr. C. B. Lewis married Miss Juna Cummings, daughter of Judge and Mrs. A. H. Cummings of Mason City, Iowa, February 18, 1902. He died in Ottumwa December 31, 1939. Mrs. Juna C. Lewis resides in Des Moines. They had no children.



Dr. Charles B. Lewis



Dr. James W. La Force

Due to a mislabeled photograph, the picture in the group of "Later Prominent Physicians" purporting to be that of Dr. C. B. Lewis is not Dr. C. B. Lewis, but an earlier picture of his father, Dr. C. G. Lewis, whose later picture appears in the same group. The photograph of Dr. J. W. La Force was obtained subsequent to publication of the biographic sketch in August, 1945.

*Dr. Alice M. Stark* was born on a farm near Ypsilanti, Michigan, where she was reared and received her early education. After graduating from the State Normal School, which was located near her home, she engaged in teaching school for several years. Her father was opposed to her studying medicine; nevertheless, she finally entered upon the study of medicine in the office of Dr. Ruth Gerry. In 1876 she entered the Medical Department of the State University, at Ann Arbor, Michigan, where she remained through 1878. After six months in a hospital for women and children in Boston, Massachusetts, she returned to Ann Arbor and graduated in the class of 1879. She came to Ottumwa later in that year, and for a time associated herself in practice with Dr. Jefferson Williamson. Unfortunately, women doctors in those days were not overly popular with the laity, but through the good offices of Dr. Williamson and others prominent in the medical profession, she soon obtained an enviable reputa-

tion as a medical practitioner. She was a member of the Wapello County Medical Society, the Des Moines Valley Medical Association, the Iowa State Medical Society, and the American Medical Association.

When the infirmities of old age forced her retirement from a long and successful medical career, she went to the home of friends in Kansas where she died.

Dr. Alice M. Stark was never married, but had one daughter by adoption.



A TYPICAL HOME OF THE PIONEERS

This log cabin, enlarged and remodeled at a later date for the accommodation of livestock, was built soon after the New Purchase was opened for settlement May 1, 1843. It stood in the eastern part of Steady Run Township, Keokuk County, about two miles west of the western boundary line of Iowa, which was established by the treaty of 1837, and so remained until the third or final treaty was consummated with the Sac and Fox Indians in 1842, when the remainder of the Iowa territory was ceded to the whites.

The picture was taken August 9, 1894, by the author of this volume, who was born there August 9, 1873.

#### CONCLUSION

To Dr. Jeannette Dean-Throckmorton, Iowa State Medical Librarian, for a bibliography far too long to publish; to Dr. Walter L. Bierring, State Health Commissioner, who made it possible to reproduce so many photographs; to Mrs. H. H. Moore who rendered invaluable services in many trying details; to Dr. M. Bannister, and to Mrs. Rose M. McClelland, Superintendent of Sunnyslope Sanatorium, for their excellent contributions; and to all others who contributed photographs, old letters and other valuable documents, many of which, long since consigned to attic shelves and musty cupboards, would have surely perished with the passing of the present generation, I owe a debt of gratitude, difficult to express in words. Especially am I grateful for the highly efficient mechanics of its publication in the JOURNAL.—*Clyde A. Henry, M.D.*

The End.

# THE JOURNAL BOOK SHELF

## BOOKS RECEIVED

**HOWELL'S TEXTBOOK OF PHYSIOLOGY**—Edited by John F. Fulton, M.D., Sterling Professor of Physiology, Yale University School of Medicine. Fifteenth edition. W. B. Saunders Company, Philadelphia, 1946. Price, \$8.00.

**THE 1945 YEAR BOOK OF PEDIATRICS**—Edited by Isaac A. Abt, M.D., Professor of Pediatrics, Northwestern University Medical School. With the Collaboration of ARTHUR F. ABT, Comdr., M.C., U.S.N.R., Associate Professor of Pediatrics, Northwestern University Medical School. The Year Book Publishers, Chicago, 1946. Price, \$3.00.

**PREOPERATIVE AND POSTOPERATIVE TREATMENT**—Edited by Lt. Col. Robert L. Mason, M.C., A.U.S., Cushing General Hospital, Farmington, Massachusetts; and Harold A. Zintel, M.D., Harrison Department of Surgical Research, University of Pennsylvania School of Medicine; Assistant Surgeon, Hospital of the University of Pennsylvania. Second edition. W. B. Saunders Company, Philadelphia, 1946. Price, \$7.00.

**SYNOPSIS OF PHYSIOLOGY**—By Rolland J. Main, Ph.D., Professor of Physiology, Medical College of Virginia, Richmond. The C. V. Mosby Company, St. Louis, 1946. Price, \$3.50.

**MODERN MANAGEMENT IN CLINICAL MEDICINE**—By F. Kenneth Albrecht, M.D., S.A. Surgeon, U. S. Public Health Service; Kansas State Tuberculosis Consultant; Formerly Clinical Director, U. S. Marine Hospital, Baltimore, Md. The Williams & Wilkins Company, Baltimore, 1946.

**GASTRO-ENTEROLOGY**—By Henry L. Bockus, M.D., Professor of Gastro-enterology, University of Pennsylvania Graduate School of Medicine. In three volumes; Volume III—“The Liver, Biliary Tract, and Pancreas, and Secondary Gastro-intestinal Disorders.” W. B. Saunders Company, Philadelphia, 1946. Price, 3 Volumes and separate desk index, \$35.00.

**THE 1945 YEAR BOOK OF GENERAL SURGERY**—Edited by Evarts A. Graham, M.D., Professor of Surgery, Washington University School of Medicine, Surgeon-in-Chief of the Barnes Hospital and of the Children's Hospital, St. Louis. The Year Book Publishers, Chicago, 1946. Price, \$3.00.

**AMBULATORY PROCTOLOGY**—By Alfred J. Cantor, M.D., Associate Proctologist, Kew Gardens Hospital, Long Island, New York. With a foreword by BEAUMONT S. CORNELL, M.D., Editor, American Journal of Digestive Diseases. Paul B. Hoeber, Inc., New York, 1946. Price \$8.00.

## BOOK REVIEWS

### COSMETICS AND DERMATITIS

By Louis Schwartz, M.D., Medical Director, U. S. Public Health Service; Chief, Dermatoses Section, Division of Industrial Hygiene; Adjunct Professor in Dermatology, Georgetown University School of Medicine; Associate Clinical Professor in Dermatology and Syphilology, New York University College of Medicine; and SAMUEL M. PECK, M.D., Medical Director (R) U. S. Public Health Service; Associate Attending Dermatologist, Mt. Sinai Hospital, New York City; Attending Dermatologist and Syphilologist, Skin and Cancer Unit of the New York Post-Graduate Medical School and Hospital of Columbia University. Paul B. Hoeber, Inc., New York, 1946. Price \$4.00.

This book presents a carefully prepared discussion of a subject of almost universal interest. Scientific study of the effects of cosmetics on the skin is of recent origin, and in this book Drs. Schwartz and Peck have summarized and discussed the results of the best research in this field.

The material will be of interest to the general practitioner as well as to the dermatologist. A description of the anatomy and physiology of the skin is followed by a discussion of different types of cosmetics and their effects upon the skin. Dentifrices, deodorants, depilatories, and soaps as well as powders, creams, perfumes and other materials more usually thought of as cosmetics are studied.

The book contains a list of cosmetics reported to have produced dermatitis along with comments as to the comparative frequency of these products as causes of trouble. Of even greater value are the

lists of the chemicals which most frequently bring about reactions.

Chapters on the diagnosis and treatment of cosmetic dermatitis should be of great help to the physician. Information about the history of cosmetics and an analysis of cosmetic advertising adds to the interest of the book.

M. H. N.

### THE 1945 YEAR BOOK OF GENERAL SURGERY

Edited by Evarts A. Graham, M.D., Professor of Surgery, Washington University School of Medicine, Surgeon-in-Chief of the Barnes Hospital and of the Children's Hospital, St. Louis. The Year Book Publishers, Chicago, 1946. Price, \$3.00.

The Year Book of General Surgery offers a quick, concise review of the outstanding surgical literature of the year of 1945. For the serviceman who did not have access to many periodicals it will help to bring him up to date; for the man who has read extensively during the year it will recall to his memory articles and technics which perhaps did not make the impression which their importance deserves.

As might be expected during a war year, a considerable portion of the reviews are devoted to traumatic surgery arising from the war experiences. Much space is devoted to penicillin, and there appears to be a decrease in the enthusiasm for the sulfa drugs.

Skin grafting with the plasma-thrombin method of fixation; the use of curare in anesthesia and thiouracil in the treatment of thyroid disease are some of the important articles summarized in this vol-



ume. Due to the large number of vascular injuries during the war, the treatment of arteriovenous aneurysms and the nonsuture method of anastomosis of blood vessels are represented by several good articles. The increasing interest in the prevention and treatment of venous thrombosis gives rise to interesting discussions on the use of heparin, dicoumarol and venous ligation.

M. T. B.

#### A BLIND HOG'S ACORNS

Vignettes of the Maladies of Workers

By Carey P. McCord, M.D. Cloud, Inc.,

Publishers, Chicago, 1946. Price, \$2.75.

This book turns out to be a compendium of the experiences in practice of a physician primarily interested in industrial accidents and diseases, but who, nevertheless, finds the practice spiced with as many amusing incidents as any practitioner.

The volume will make it much easier for the layman to understand the problems of industrial health. All physicians will find it entertaining. The book is heartily recommended for you to take on your vacation this summer.

E. M. G.

#### THE DIAGNOSIS AND TREATMENT OF PULMONARY TUBERCULOSIS

By Moses J. Stone, M.D., Assistant Professor in Medicine, Boston University School of Medicine, Instructor in Medicine, Tufts Medical School, Boston; and PAUL DUFAULT, M.D., Superintendent of the Rutland State Sanatorium, Rutland, Massachusetts. With a Foreword by Henry D. Chadwick, M.D., Lea & Febiger, Philadelphia, 1946. Price, \$3.50.

Resisting the current tendency toward ever larger and more exhaustive treatises on medical subjects, Drs. Stone and Dufault have provided in a small volume a commendable amount of selected material on the subject of pulmonary tuberculosis. The early chapters cover the laboratory aspects of the disease and a survey of its pathogenesis. There are chapters on history taking and physical diagnosis in which the limitations of the methods are stressed. The discussions of the radiologic examination of the chest and the differential diagnosis of pulmonary lesions are liberally illustrated with reproductions of x-ray films of high quality.

In the matter of therapy there will undoubtedly be disagreements on individual points. Pleasing is the authors' attitude toward various drugs which have crept into usage and have never been discarded, in spite of proved uselessness. An attempt has been made to evaluate the various collapse measures, and this includes comments on the utilization of lobectomy and pneumonectomy in tuberculous patients.

The volume is brought to a close with chapters on tuberculosis in industry, social aspects, mental as-

pects, and prevention. Selected references to recent literature are appended to each chapter. The authors have made no effort, indeed have not intended, to probe controversial questions or to offer new theories. They have succeeded in surveying in enviable manner the field of tuberculosis of the lungs and associated structures. The result is a readable compact volume which can be commended to medical students and physicians.

L. J. G.

#### ESSENTIALS OF CLINICAL PROCTOLOGY

By Manuel G. Spiesman, M.D., Proctologist, Mt. Sinai and Edgewater Hospitals; Consulting Proctologist, Grant, Henrotin and St. Elizabeth Hospitals; Former Head of the Cook County Hospital Rectal Clinic. Foreword by ANTHONY BASSLER, M.D., Consulting Gastroenterologist, St. Vincent's Hospital and other hospitals, New York City. Grune & Stratton, New York City, 1946. Price, \$4.00.

This is a book of 238 pages, 29 chapters and some 62 excellent illustrations. It is, to date, one of the most modern presentations of the advances in proctology.

The surgical treatment for pectenosis is completely covered. Since this is a fairly new approach to the tight and painful anus and since this condition is commonly seen, it should be of great interest to all surgeons, proctologists, and general practitioners.

The use of nupercaine in oil in the injection treatment of coccygodynia is a new advancement described and should prove a boon to those sufferers.

Other new material includes: combined pentothal and novocaine anesthesia in anorectal conditions; new anatomic conception of the external sphincter muscle and its surgical management in fistulas; and the use of sulfa drugs in postoperative bleeding and ulcerative colitis.

C. H. J.

#### BIBLIOGRAPHY OF INFANTILE PARALYSIS 1789-1944

With select abstracts and annotations prepared under direction of the National Foundation for Infantile Paralysis. Edited by MORRIS FISHBEIN, M.D., Editor, Journal of the American Medical Association. Compiled by LUDVIG HEKTOEN, M.D., Chief Editor, Archives of Pathology, and ELLA M. SALMONSEN, Medical Reference Librarian, John Crerar Library, Chicago. J. B. Lippincott Company, Philadelphia, 1946.

This volume will prove of extreme value to those physicians interested in infantile paralysis and its treatment, since it lists a complete bibliography of periodical literature published from 1789 through 1944.

E. M. G.

## SOCIETY PROCEEDINGS

### Black Hawk County

The Black Hawk County Medical Society held its regular meeting on June 13 at the Medical Lodge in Cedar Heights. Herman O. McPheeters, M.D., of Minneapolis, Minnesota, spoke on "Injection Treatment of Veins," illustrating his talk with color slides. A buffet lunch was served at 6:30 p.m.

C. A. Waterbury, Jr., M.D., Secretary

### Butler County

Members of the Butler County Medical Society and their wives met at the American Legion hall in Aplington on Monday evening, June 10. Dinner was served by the American Legion Auxiliary.

### Dallas-Guthrie Society

The Dallas-Guthrie Medical Society and Auxiliary honored Dr. and Mrs. Edwin J. Butterfield of Dallas Center at a dinner at McDonald Tea Room in Perry May 23. Mrs. John F. Loosbrock was elected president of the auxiliary to fill the vacancy caused by Mrs. Butterfield's resignation. Dr. Butterfield retired from active practice in May.

### Des Moines County

At its meeting in Hotel Burlington, Burlington, June 4, the Des Moines County Medical Society voted to accept in principle the Iowa Medical Service plan but to allow each doctor the option of participation. Mr. Edwin M. Kingery, executive director of the Iowa Medical Service, presented the plan. Robert L. Parker, M.D., of Des Moines, president of the Iowa State Medical Society, was a guest at the meeting.

### Johnson County

The annual picnic of the Johnson County Medical Society was held at the home of Dr. and Mrs. George C. Albright in Iowa City June 5.

R. H. Flocks, M.D., Secretary

### Linn County

Morgan J. Foster, M.D., was installed as president of the Linn County Medical Society at the annual business meeting and social gathering June 7 at the Z.C.B.J. Hall in Cedar Rapids. Those elected to office were: Ernest G. Kieck, M.D., president-elect; Gaylord R. Andre, M.D., vice president; Lawrence J. Halpin, M.D., secretary; Robert M. Chapman, M.D., treasurer. All are from Cedar Rapids except Dr. Andre who is from Lisbon.

### Pocahontas County

John B. Thielen, M.D., of Fonda was host to the members of the Pocahontas County Medical Society at a meeting of that organization held in Fonda Tuesday evening, May 23.

### Washington County

The Washington County Medical Society was host May 23 at a dinner meeting honoring Charles W. McLaughlin, M.D., of Washington, who has completed 50 years of practice, and Nimrod J. Lease, M.D., of Crawfordsville, who has practiced for 52 years. Enos D. Miller, M.D., of Wellman, president, presided, then called on Clyde A. Boice, M.D., of Washington, who presented Dr. McLaughlin with his Fifty Year Club pin and a framed letter of appreciation from the Iowa State Medical Society. Dr. Lease received his pin two years ago. Mr. R. E. Shannon, editor of the Washington Evening Journal, was the speaker of the evening. Wives of the members were guests.

W. S. Kyle, M.D., Secretary

### Woodbury County

Allen C. Starry, M.D., of Sioux City was the honored guest of the Woodbury County Medical Society at the Mayfair Hotel, Sioux City, June 6. Paying tribute to Dr. Starry was William C. McCarthy, M.D., of the Mayo Clinic, Rochester, Minnesota. Clifford R. Watkin, M.D., president of the society, presided. On behalf of the society, Charles T. Maxwell, M.D., presented a gift to Dr. Starry, who is retiring July 1.

### PERSONAL MENTION

The JOURNAL is pleased to announce the release of the following physicians from active military duty:

Dr. John L. Barner, who was recently released from active duty in the Army Medical Corps, has accepted the position of Clinical Director of State Cancer Control, University Hospitals, Athens, Georgia. Dr. Barner, who was a Major at the time of his release, formerly practiced in Des Moines. He was in service over four and one-half years.

Dr. Frank E. Coburn returned in April to the Psychopathic Hospital, State University of Iowa College of Medicine, where he is a senior psychiatrist. Dr. Coburn held the rank of Major in the Royal Canadian Army Medical Corps at the time of his discharge.

Dr. A. Herrmann Downing recently received his release from active duty with the Army Medical Corps and has become associated with his father, Dr. James A. Downing of Des Moines, a specialist in diseases of the eye, ear, nose, and throat. He was a Captain at the time of his release.

Dr. Harold J. Evans of Davenport has received his release from the Army Medical Corps following seven months of hospitalization. He had served



forty-five months and held the rank of Major. Dr. Evans is president-elect of the Scott County Medical Society.

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Dr. Chauncey E. Heffernan of Sioux City is resuming his medical practice in that city following three and one-half years service with the Army Medical Corps. He held the rank of Captain at the time of his release.

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Dr. Lewis E. January was separated from the Army Medical Corps with the rank of Lieutenant Colonel on April 24. He has rejoined the faculty of the State University of Iowa College of Medicine as Assistant Professor of Internal Medicine.

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Dr. Donald J. McDonald of Des Moines has been relieved of active duty with the Army Medical Corps after more than three and one-half years of service. He held the rank of Major.

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Dr. James P. McGowan of Harlan has been released from active duty with the Navy Medical Corps, in which he was a Commander, after three years of service.

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Dr. John H. Matheson of Des Moines will reopen his office in the Equitable Building after July 4. Dr. Matheson, who specializes in diseases of the eye, ear, nose, and throat, was a Lieutenant Commander at the time of his release from the Navy Medical Corps.

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Dr. Carl A. Noé was separated from the Army Medical Corps on May 21 with the rank of Lieutenant Colonel. He has resumed private practice in Cedar Rapids in association with Dr. Wayne J. Foster.

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Dr. Lewis M. Overton plans to resume his orthopedic practice in Des Moines where he has an office in the Equitable Building. Dr. Overton was a Lieutenant Commander in the Navy Medical Corps in which he served over a year and a half.

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Dr. Stanton L. Sheimo of Northwood is now associated with the Langley-Porter Clinic, a unit of the University of California Medical Center, where he took over the position soon after his release from the Navy Medical Corps May 15. Dr. Sheimo, who held the rank of Lieutenant (j.g.), expects to be with the medical center three years, specializing in psychiatry. He was in the service over two years.

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Dr. Ragnar M. Sorensen of Des Moines was released from duty with the United States Public Health Service, in which he held the rank of Lieutenant Colonel, in June. He has resumed his position as director of the Venereal Disease Division at the State Department of Health.

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Dr. Eugene C. Wagner, who, before entering military service, was associated with the State Depart-

ment of Health, recently received his discharge from the Army Medical Corps in which he had served approximately three and one-half years. He held the rank of Captain at the time of his release.

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The following physicians, who were previously reported released from active military duty, have announced the establishment of their offices in the following locations:

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Dr. Marcus B. Emmons, who was recently released from the Army Medical Corps, has established an office in Clinton where he will limit his practice to psychiatry and neurology. Dr. Emmons held the rank of Major at the time of his discharge.

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Dr. Marshall D. Huston, formerly of Centerville, took over the practice and offices of the late Dr. Cecil C. Grant of Cedar Falls June 1. Dr. Huston will specialize in diseases of the eye, ear, nose, and throat.

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Dr. Merlin R. Wyatt, formerly of Dallas, Texas, has returned to his practice in Manning, Iowa.

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The four Gilfillan brothers, Dr. George W. of Bloomfield; Dr. Clarence D. N. of Eldon; Dr. Earl E. of Memphis, Missouri; and Dr. Homer J., Jr. of Quincy, Illinois, have announced the establishment of a diagnostic clinic in Bloomfield in the near future. The doctors are the sons of Dr. Homer J. Gilfillan, formerly of Henry county, who is still practicing in Van Buren County.

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Drs. Carl A. Samuelson and Robert E. Griffin recently announced their partnership in the practice of medicine and surgery at Sheldon. Dr. Samuelson is completing his twentieth year of practice in Sheldon. Dr. Griffin recently returned from Iowa City after completing a three-month postgraduate course at the State University hospitals. Prior to that he served in the Army Medical Corps three and one-half years.

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Dr. Frank J. Anderson, recently retired to inactive status in the Navy Medical Corps, will practice medicine in Rolfe. Dr. Anderson, who held the rank of Lieutenant (j.g.) at the time of his release, opened his office June 15.

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Dr. Earl D. Lovett of Vinton announced that Dr. John E. Blumgren of Logan has become associated with him in the practice of medicine. Dr. Blumgren was recently released from active service with the Navy Medical Corps in which he held the rank of Lieutenant.

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Dr. Ludwig Gittler of Fairfield, who was recently discharged from the Army Medical Corps in which he held the rank of Lieutenant Colonel, has been given the Military Valor Cross of the Italian government. While Dr. Gittler served in Italy, he was division surgeon of the Thirty-fourth Infantry Division.

Dr. William A. Seidler, Jr., former Captain in the Army Medical Corps with a service record of thirty-three months, began practice in Jamaica in May. He is associated with his father, Dr. William A. Seidler, who expects to retire from active practice soon.

Dr. Howard Hildebrand, formerly a senior medical officer of the Iowa State College training station, has become associated with the McFarland Medical Clinic at Ames.

Dr. Paul E. Gardner of New Hampton completed fifty years of membership in the medical profession during the second week in June. Forty-five of those years have been spent in his present location.

Dr. Chester H. Johnson, after forty years of practice in the field of medicine and surgery, retired from active practice recently. His nephew, Dr. Harmon D. Seeley of Centralia, Illinois, will succeed him in his practice at Cherokee, where he has been located for thirty-two years.

Dr. Everett D. Plass, professor and head of obstetrics and gynecology at the University of Iowa College of Medicine, sailed on the Queen Mary June 20 for a three-month medical mission in Czechoslovakia. This Unitarian medical mission will cooperate with UNRRA and the Czechoslovakian government to bring research and technical information embodying the advances made in American medicine during the war years.

Lieut. Comdr. Emerson J. Steenrod of Iowa Falls was recently commended for "distinguished service in the line of his profession as orthopedic surgeon and general surgeon aboard the U. S. S. Solace from October, 1944, to September, 1945." Dr. Steenrod entered the service November 15, 1943.

Lieut. Col. Hyman M. Hurevitz of Davenport has been awarded the Bronze Star for his study of diarrhea and dysentery among American troops in the Mediterranean area from May 1, 1943, to May 8, 1945. Dr. Hurevitz was graduated from the State University College of Medicine in 1930 and entered service in August, 1942.

Dr. Lloyd H. Launder, formerly of Marshalltown, recently transferred his practice to La Mesa, California. He will open an office in San Diego July 1.

Maj. Gen. Paul R. Hawley, medical director of the veterans administration, Washington D. C., recently announced the appointment of eleven physicians as consultants at the Veterans Hospital in Des Moines. They are Dr. Lester D. Powell, clinical professor of surgery; Dr. Joseph B. Priestley and Dr. Daniel J. Glomset, clinical assistant professors of surgery; Dr. Walter D. Abbott, consultant in neurosurgery; Dr. Walter L. Bierring, consultant in internal medicine;

Dr. Everett M. George, consultant in orthopedics; Dr. Clifford W. Losh, consultant in urology. Dr. E. Parish Lovejoy, consultant in anesthesiology; Dr. Byron M. Merkel, consultant in eye, ear, nose, and throat diseases; Dr. Maurice H. Noun, consultant in dermatology; and Dr. Kenneth M. Brinkhous, consultant in pathology. All are from Des Moines with the exception of Dr. Brinkhous who is associated with the State University. Two attending physicians were also appointed. They are Dr. Daniel W. Coughlan and Dr. Herman J. Smith, both of Des Moines.

Dr. Fredric W. Wilson, Jr., was recently separated from the Army Medical Corps and has become associated with his father, Dr. Fredric Wilson, in the practice of surgery in Sioux City. Their offices are in the Frances Building.

#### MARRIAGE

Miss Julia Ann McDaniel, daughter of Mrs. C. P. McDaniel of Crystal Lake, Illinois, former resident of Sioux City, became the bride of Dr. Henry H. Hamilton of Cedar Rapids on June 1 in the Church of the Assumption at Crystal Lake. Following a trip through the East and Canada, the couple will be at home in Cedar Rapids where Dr. Hamilton practices.

#### DEATH NOTICES

Hennessy, Maurice Charles, of Council Bluffs, aged fifty-five, died June 7 of a heart ailment at the University Hospital in Iowa City following an extended illness. He was graduated from the University of Illinois College of Medicine in 1913, and at the time of his death was a member of the Pottawattamie County and the Iowa State Medical Societies. A more complete obituary will be found in the History of Medicine section of this issue.

Herron, David Alderman, of Iowa Falls, aged sixty-two, died May 25 following a relapse from an operation undergone a few weeks previously. He was graduated from the Indiana Medical College, School of Medicine of Purdue University, in 1907. At the time of his death he was a member of the Iowa State Medical Society and the Hardin County Medical Society.

Mills, Ernest Mannering, of LeGrand, aged eighty-three, died June 9 of myocarditis. He was graduated from the University of Illinois College of Medicine in 1890, and at the time of his death was a life member of the Marshall County and the Iowa State Medical Societies.

Walker, John Milton, of Dubuque, aged seventy, died June 12 at the University Hospital in Iowa City following a short illness. He was graduated from the Keokuk Medical College, College of Physicians and Surgeons, in 1906. At the time of his death he was a member of the Dubuque County and the Iowa State Medical Societies.



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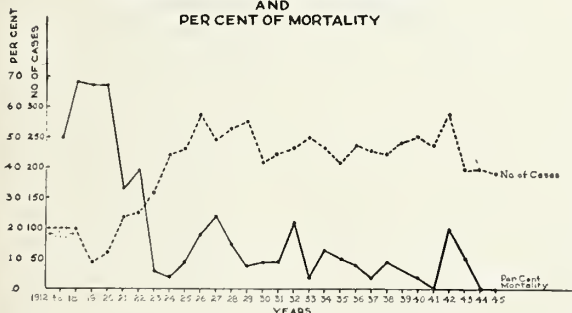
No. 8

### THYROID DISEASE

H. H. SEARLS, M.D., San Francisco, California

A discussion of thyroid disease in all its ramifications would consume many hours. In the time allotted here one can only emphasize features of special interest to an audience engaged in the practice of surgery. In the wards and Outpatient Department of the University of California Hospital it has been my privilege to observe and study, in conjunction with internists, pathologists, roentgenologists and other surgeons interested in the subject, a modest series of patients suffering from thyroid disease.<sup>1</sup> In the past 25 years approximately 5,600 of these have been subjected to partial thyroidectomy by members of the visiting and resident staff in surgery. During this period there were 56 deaths, an over-all mortality rate of one per cent.

NUMBER OF CASES OF THYROIDECTOMIES  
AND  
PER CENT OF MORTALITY



The classification presented by Plummer and Wilson in 1913 is still useful as a basis for the diagnosis and treatment of thyroid disease. This pathologic classification has stood the test of over 30 years' clinical application. However, the sharp differentiation originally made between the two types of toxic goiter has failed of universal acceptance. Today they are usually considered to

be different phases of the same disease. True tumors of the thyroid are fairly common, however, and when possible should be differentiated from the hyperinvolucional type of nodular goiter.

During the study of this interesting series of patients, a number of investigations have been completed. Recognition of an anxiety neurosis exhibiting hyperventilation and closely simulating hyperthyroidism has resulted in its differentiation from toxic goiter and the avoidance of unnecessary surgical treatment. Irregularities of respiratory rhythm, best demonstrated on the respiratory tracing in a basal metabolism determination, are suggestive of the hyperventilation syndrome.<sup>2</sup>

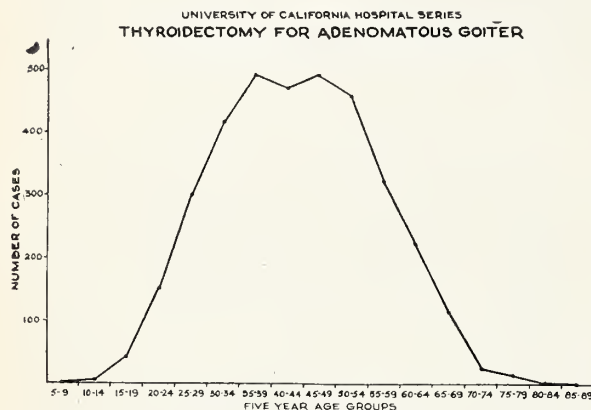
Inflammation of the thyroid fortunately is rare. In the acute stage it exhibits the distressing picture of an overwhelming toxicity from the rapid absorption of the products of inflammation, together with marked symptoms arising from pressure on the trachea. Nonsuppurative resolution over a period of weeks or months usually occurs. Occasionally abscesses have developed and have required surgical drainage. Recently, in a number of instances administration of penicillin has abruptly arrested the process and caused a complete subsidence of all symptoms.

Chronic thyroiditis has been seen more frequently. Moderate fibrosis and lymphocytic infiltration are common findings in the microscopic picture. Rarely this process may progress to a nearly complete replacement of the glandular tissues by an overwhelming fibrosis. This condition, first described by Riedl in 1896,<sup>3</sup> is that of an iron-hard goiter causing extreme constrictive pressure on the trachea. We have considered that Hashimoto's struma may possibly have an inflammatory etiology. In this type, lymphoid elements replace the glandular structure. Again, pressure on the trachea is the outstanding complaint. Marked hypofunction has followed both surgical and nonsurgical therapy. Penicillin has not influenced the course of any of the chronic types of thyroiditis.

From the Division of Surgery, University of California Medical School, San Francisco.

Presented before the Ninety-fifth Annual Session, Iowa State Medical Society, Des Moines, April 18 and 19, 1946.

The development of carcinoma in the hyperplastic glandular tissue of an exophthalmic goiter is extremely rare. Malignant goiter is nodular. It either is primarily neoplastic or develops from cancerous degeneration of a previously benign adenoma. Frequently encountered in our series are instances of patients who, having had nodular goiter for from 20 to 40 years, have then developed a malignancy of the thyroid. Carcinoma



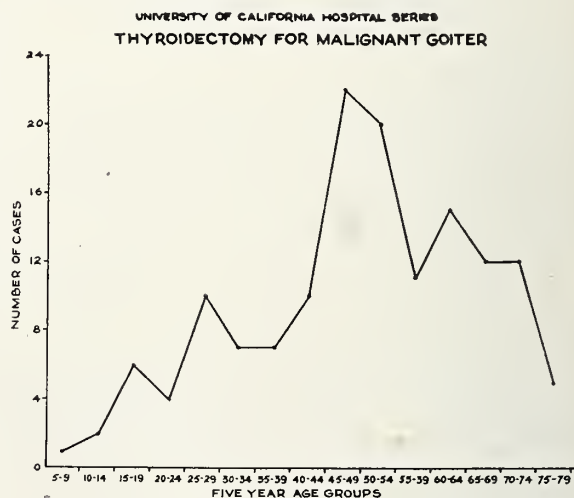
appears in aberrant thyroid tissue at a much earlier age than in the normally situated thyroid gland.<sup>4</sup> Where goiter is endemic, malignant tumors of the thyroid occur in greater numbers.<sup>5</sup>

One in every 25 women and one in every nine men who have come to us for surgical treatment of nodular goiter since 1912 (a total of 147 patients) have been found to have cancer of the thyroid gland. Of these 29 per cent were between 45 and 55 years of age, but a surprising number (16 per cent) were under the age of 30. Clinical differentiation between benign nodular goiter and early malignancy is impossible. Only the spread of malignancy beyond surgical cure permits recognition of its character. Thus, nodular goiter carries such a strongly positive threat of malignant development that its surgical removal is mandatory. Particularly, an increase in the rate of growth of a tumor, or the development of pressure symptoms in the neck are danger signals calling for immediate thyroidectomy.

There has been much discussion and difference of opinion among pathologists regarding classification of types of thyroid malignancies. We have recognized two groups as being most important from a pathologic standpoint. When, in a microscopic picture, a papillomatous architecture can be recognized in any part of a section, the malignancy is called a papillomatous adenocarcinoma. When only solid groups of cells are seen, the growth is called a malignant adenoma. The diag-

nosis of malignancy in these two types of tumor is based not so much on the presence of frequent mitoses as upon a tendency to metastasize, or to invade the capsule of the tumor, the surrounding thyroid tissue, and particularly the lumen of neighboring blood vessels. A third group has been found necessary in which can be placed the scirrhous type and the wildly growing anaplastic cellular types of carcinoma.

Because of the nearly universal radio-sensitivity of the papillary type, the prognosis is best for the patient from whom has been removed a tumor of this architecture. This tissue is so responsive to irradiation that, even though recurrence develops, the growth can be completely arrested for many years. The other types do not respond well to x-ray, and the prognosis, therefore, is considerably worse. When the non-differentiated cell is encountered, recurrence is rapid and life expectancy limited to months. The time to treat malignant goiter is before it can be recognized by clinical means. In this series, living after five years were 20 per cent of patients in whom carcinoma was diagnosed before operation, 40 per cent in whom it was diagnosed at operation, and 80 per cent in whom it was first diagnosed on microscopic examination. It is our opinion that the patient in any age group exhibiting a nodular goiter carries in his neck a dangerous threat of cancer and that the removal of such nodules by partial thyroidectomy immediately following their recognition should be strongly advised.



The test for basal metabolic rate remains the best index of the level of thyroid function. However, several factors besides the degree of thyroid activity influence the metabolic rate and may render the test misleading. Individuals in evident good



health may have an abnormally low rate. Should such a person become thyrotoxic, the development of hyperthyroidism might fail to bring the basal rate above zero. Such masked hyperthyroidism has been observed frequently in our series, especially in the patient with toxic nodular goiter.<sup>6</sup> Blood cholesterol readings may be of assistance when the basal metabolic rate is not informative. Blood cholesterol is abnormally low in hyperthyroidism and high in hypothyroid states and myxedema.

The group of clinicians who have studied our series are in fair accord regarding the *treatment* of these various diseases of the thyroid. It is believed that iodine should be used as a prophylactic public health measure, especially in regions where goiter is endemic.

*Simple hypertrophy* of the thyroid (adolescent goiter) is never a surgical disease. It should be treated by the oral administration of sufficient thyroid substance to produce a mild hyperthyroidism. Three or four grains daily, given under careful observation, will reduce the size of the gland. Iodine has no value in the therapy of this condition.

*Nodular goiter*, whether toxic or not, should be treated by partial thyroidectomy. Complete removal of the adenomatous tissue should be carried out; all normal appearing gland should be preserved. X-ray therapy is not rational in this type of goiter.

*Toxic diffuse* (hyperplastic or exophthalmic) goiter in our series has been treated in a large majority of cases by subtotal resection. However, carefully selected patients with this diagnosis have been completely relieved of toxicity by adequate roentgen therapy. The best results obtained by this method have been in patients only moderately toxic, without complications, who were willing to spend the additional time required for cure.

During this study there has been a constant combined effort toward the improvement of our technic of thyroidectomy. Since 1923, when Plummer demonstrated the beneficial effects of iodine in preparation for surgery, we have not employed the multiple-stage plan of surgical treatment. We consider it to be contraindicated even in the more toxic patients, as it is costly and cumbersome and, in our opinion, does not increase the margin of safety.

From the technical standpoint we believe in an absolutely complete hemostasis, which permits of a careful anatomic dissection in a bloodless field. Only in this way can the operator safeguard the parathyroids and laryngeal nerves. Injury of either of these structures carries the tragic

threat of semi-invalidism. Preservation of the lateral capsule of the thyroid further protects the parathyroids.<sup>7</sup>

Radical thyroidectomy increases the possibility of distressing postoperative hypothyroidism. After experience with residues of varying sizes, we are inclined toward a moderate resection when treating toxic diffuse goiter, seeking by complete follow-up to recognize recurrences early and to arrest them by irradiation. In operation for toxic adenoma, removal of all adenomatous tissue is essential. As a result, often little tissue can be left. Thyroid substance by mouth thereafter may be required.

Ligatures and sutures are of fine cotton. By using nonabsorbable suture material and emphasizing hemostasis we have been able to close the wounds tightly without drainage.

After operation for toxic diffuse goiter it is our practice to prescribe five drops of Lugol's solution once daily for one month. Rest and moderate sedation are also advised.

A fairly large group of children with exophthalmic goiter have been treated, chiefly by subtotal thyroidectomy. By experience it was determined that permanent cure was attendant on a more radical resection of thyroid tissue than sufficed in the adult patient. In children the tendency for recurrence was greater, and the development of postoperative hypothyroidism much less frequent.<sup>8</sup>

The prolonged administration of iodine to the patient with toxic goiter, resulting in the "iodine-fast" gland, increases the hazard of surgery and interferes with a proper response to the roentgen ray or to preparation by thiouracil.

Thiouracil has been administered to selected patients in our series during the past two years. This drug has a remarkable effect on the patient with a toxic goiter of either the diffuse or nodular type. Given over a prolonged period it will alleviate all of the symptoms of hyperthyroidism and return the basal metabolism to a normal or even subnormal level. Chiefly, it has been used in preparation for surgical treatment of the severely toxic patient. Its effect on the physical structure of the gland, by increasing vascularity and friability, renders operation after its use far more difficult.<sup>9</sup> By substituting iodine for ten days immediately before operation, involutional changes develop which make surgical removal technically less troublesome.

Toxic manifestations from the administration of thiouracil are not uncommon. In our opinion it should be prescribed only for the patient whose progress is completely controlled by hospitaliza-

tion. Outstanding is its effect on the white blood cells, resulting in the development of leukopenia and an agranulocytosis in about 5 per cent of patients. This may be further complicated by a dangerous agranulocytic angina resistant to treatment. Less important manifestations are fever, skin eruption and swollen salivary glands.<sup>10</sup> Thiouracil is indicated in the very toxic, iodine-resistant patient. Iodine should not be given concomitantly. Careful observation, including frequent white blood count, should parallel its administration. Its use should be abandoned at the first sign of injurious effects.

In conclusion I would like to suggest:

1. That in toxic goiter the administration of iodine should be reserved for, but always prescribed in, the immediate period before surgery, even in those patients in whom a course of thiouracil has restored normal function.
2. That toxic diffuse goiter is best treated by partial ablation either surgically or, in selected cases, by x-ray. This resection should be more radical in children than in adults.
3. That nodular goiter presents the dangerous threat of malignancy and therefore demands early removal.
4. That in experienced hands the mortality rate in thyroid surgery approaches zero and complications have become exceedingly rare.

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#### DISCUSSION

*Dr. Lester D. Powell* (Des Moines): Mr. Chairman, Dr. Searls, Members of the Society, Friends: Dr. Searls has outlined very nicely, in the short time he was given to speak, his subject. I might re-emphasize some of the things he said, namely, that until goiter as an entity was classified, there

was no organized or definitive type of treatment. There have been many classifications of goiter through the years, but the most simple one I know that apparently meets all of our requirements is the one he mentioned.

About the turn of the century, the treatment of goiter was very difficult and the mortality was high, following which came the preparations of patients for this trouble with the result that the mortality was lowered considerably.

The main thing that I think helped most of us, after we realized there was a classification, was that many of these tachycardia cases which were not thyroid disease in the first place were spared an operation. Dr. Searls spoke about that in connection with neurosis and hyperventilation. Such cases are not surgical.

Then he spoke about the incidence of thyroid tissue in some of our lake regions, especially in Ohio, where school children were given iodine. Those are the adolescent type of goiters and are not surgical except in rare cases in which they have become so large that, because of pressure symptoms, it is advisable to remove them. Most goiters, if taken in time, will respond to iodine.

Next are the large goiters that do not respond to iodine treatment. Those are surgical. Then comes the nontoxic adenoma which, if left untreated, usually will, in the course of fifteen to sixteen years, become toxic. I think it was Crile who stated that almost all toxic goiters of the adenomatous type have been present fifteen years and some months before they show toxic symptoms. He reviewed several thousand cases, both at his clinic and elsewhere, before he made that statement. He also said that all adenomatous goiters should be surgical, as did Dr. Searls.

The reason for this is that he found the adenomatous type of goiter became malignant in 4 per cent of the cases. Because of that and the comparison of the risk from surgical procedure, you have about 3 per cent in your favor. That does not take into consideration the morbidity, because most of these people, over a period of time, become toxic. With those cases you have a cardiovascular-renal syndrome which makes a person anything but well. Therefore, surgery is advised for all of them.

It is not uncommon to see a case nowadays in which the first physician who saw it said, "You have a little nodule in the neck. It amounts to nothing. Just let it go until it bothers you."

Because you know that 4 per cent of these cases become malignant, you are playing with dynamite caps if the goiter is not properly treated early. The morbidity and mortality is less if it is taken before it has undergone toxic or malignant changes.

When the patient gets a husky voice and has a loss of weight, rapid heart, heat intolerance and metabolic elevation, you know that you have waited too long. It doesn't pay to be too kind to a person who has a lesion that you know runs a 4 per cent risk of being malignant.

Then we come to the hyperplastic type of thyroid



disease which has been treated by x-ray. I think many people will perhaps argue a little with Dr. Searls on treating such cases with x-ray. It has been used in some clinics and given up. It has been used in others, and the doctors say, just as he did, that there is a small percentage of selected cases in which that treatment does well. However, there is a tendency to treat cases that have a mixed gland in which there is a hyperactive goiter and a small nodule. Potentially, it is an exophthalmic goiter but a small nodule can't always be felt in it.

When treated with x-ray, sometimes you have the unfortunate occurrence of having this small nodule become malignant. Within the past month I treated one for a doctor who is present, and that is what we found. The case was treated successfully otherwise for thyroid disease by roentgen ray, and then, in the course of time, developed malignancy. As he stated, malignancy in a hyperplastic type of goiter is extremely rare and in the nodular goiter quite frequent.

Thus, you may say that the nodular goiter should be treated surgically and that the hyperplastic goiter should also be, but should first be medically prepared. Iodine has been used since the turn of the century until the last two years when thiouracil has been used with quite satisfactory results, although such treatment is not without danger. Dr. Searls spoke of thiouracil being a hospital procedure. I agree that it is wise. I think it is a poor procedure to treat patients with thiouracil and allow them to be away from your immediate care.

Dr. Searls mentioned the complications, the immediate increase in size, followed by the dropping of the toxic manifestations and the swelling of the glands, sore throat, the anemia that goes with it and the agranulocytosis. The outcome is a sad one in a high percentage of those cases unless they are recognized immediately.

One other reason for treating an adenoma early is because its change from a nontoxic to a toxic is insidious. These changes don't take place early nor rapidly.

I don't know anything about the bombshell, and to my knowledge we have not tried it out here. I think there is something to it. It is applicable not only for thyroid disease but also for malignancy elsewhere. The thyroid, however, is the most vascular organ of the body, and would perchance get more of the radioactive substance.

The technic of surgery over a period of thirty years has been quite well standardized. The Doctor likes cotton, and he has many supporters, especially on the coast and down around New Orleans. I think we here like to use catgut. He says, "That is because it speeds up your operation, and to use cotton you have to have a technic which essentially is slow because you have to be more meticulous."

When one uses catgut to expedite slowness or to gain speed, the tendency is to be a sloppy operator; you take larger bites; you tie off greater pieces of tissue. Therefore, in that particular method of doing thyroids, I would say that one should use cotton.

If a man is trained to use catgut, however, he will get the best results with it. If he is trained to use silk as they were at Hopkins, he will get better results with that. Each man should use the thing which works best for him.

## THIOURACIL IN THE TREATMENT OF GRAVES' DISEASE

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It is always embarrassing, or at least it should be, to be faced with the necessity of treating disease empirically and to have no explanation for the results of any therapeutic procedure except the old pragmatic one that "it works." It is impossible to treat a disease rationally without a complete understanding of its cause, including all the pathogenic, biologic, pathologic, chemical, pathophysiologic, and clinical aspects. Amputating a gangrenous leg may save the patient's life, but, at best, it is no more than an improvisation for which there would be no need if the nature of the process which gradually occluded the arteries to the extremity were fully understood and rational prophylactic treatment were available. With respect to the disease to be discussed, the state of our confusion is doubly confounded, for not only have we failed to gain a satisfactory understanding of its pathogenesis, but we do not even have a name for it which can properly be called scientific or is capable of universal acceptance. It is needless to recite the long list of non-descript and sometimes actually fantastic appellations which have been used at one time or another, for everyone has heard them too often already. In so far as the florid stage of the disease is concerned, which is the only one of therapeutic interest in this discussion, the one seaworthy plank among the floating debris of fancy terms and fancier theories to which we may cling temporarily is the basic metabolic abnormality which could sensibly be called "idiopathic hypermetabolism." That is the one name, however, which is never heard. Hypermetabolism implies hyperthyroidism, but the latter term is unsatisfactory because it has been widely and confusingly used in an unwarranted synecdochial sense. Hyperthyroidism is not a disease, but a pathophysiologic phenomenon which gives Graves' syndrome its florid phase. And so the man who gives any thought to the matter of good terminology ultimately takes refuge in an eponym, only to discover that priority has gained its usual reward, for the first adequate description of the disease was written by Caleb Hillier Parry, not by Robert James Graves.

Students of the natural history of Parry-Graves' disease soon learn that it is not static but dynamic, and that it is a psychosomatic disorder with a conspicuous biologic, organ-personality component. Its patterns and aspects are many, with a wide range from the extreme hyperkinetic stage, characterized always by a great increase in metabolic activity, with goiter, perhaps exophthalmos, emaciation, diarrhea, bulimia, fever, insomnia, and psychic disturbances, to the variety (usually in older people) in which there is no goiter and in which none of the so-called "surface manifestations" occur. Such a person has an increase in his metabolic rate, and his pulse pressure may be high enough to produce a pistol-shot sound in the femoral arteries, but outwardly he is placid even to the point of being phlegmatic. Finally, if we adopt the view of Moschcowitz and Bernstein,<sup>1</sup> Parry-Graves' disease may exist in a larval, constitutional stage, without hypermetabolism, which is indistinguishable from neurocirculatory asthenia.

All sorts of things may happen to the patient with Parry-Graves' disease. He may recover spontaneously, or, no matter how severe the disease may be, he may recover on iodine therapy alone. Subtotal thyroidectomy may interrupt the course of the disease permanently, but it does not literally effect a cure. Recurrences run as high as 15 per cent, so thyroidectomy may have to be repeated once or twice. Irradiation of the thyroid gland does not have much influence on the active stage of the disease. Even if some therapeutic measure is successful, the patient may continue to have exophthalmos or the syndrome of neurocirculatory asthenia. He may even have Parry-Graves' disease and myxedema simultaneously, or become permanently myxedematous if the surgeon removes too much of the gland.

Rarely has any disease provoked such furious polemics, especially between surgeons and internists. Many of us can remember with what utter horror the surgeon formerly looked upon the practice among some internists, at least as far back as 1912, of administering small doses of potassium iodide to patients with active Parry-Graves' disease. The idea was to bring about a reversion of the hyperplasia of the gland, and insult was added to surgical injury when some of these patients actually recovered, although most of them had only temporary remissions. Then, in 1923, Plummer<sup>2</sup> convinced the surgeons that the preoperative administration of iodine was good practice because it not only lowered the metabolic rate, and thus minimized the danger of thyroid crisis, but also made the job of doing the operation

easier, and reduced the mortality rate. Why Plummer chose Lugol's solution for this purpose is not clear. It is no more efficacious than any other iodine preparation, and it is not as palatable as Syrup of Hydriodic Acid. The real reason, I suspect, was that the name is noncommittal. Lugol's solution, on the face of it, does not disclose the fact that it is a mixture of iodine and potassium iodide, and thus those who had long been allergic to the use of iodine in Parry-Graves' disease were desensitized by a euphemism. Actually, the popularization of Lugol's solution for this purpose has had only one regrettable result, and that is etymological; we are now the barbarously, "lugolized" victims of "lugolization."

Those who have scanned with a critical eye the available data on the treatment of active Parry-Graves' disease with thiouracil will perceive that, as is the case with iodine, thyroidectomy, and everything else that has been tried, it is an empirical procedure. Furthermore, its use is often followed by serious toxic reactions. In spite of the fact that large numbers of observations have been pooled,<sup>3</sup> many questions of primary importance remain unanswered. It is not yet clear whether it makes any difference what kind of goiter accompanies the hypermetabolism. Some are of the opinion that the drug should not be used if the thyroid gland is large and nodular. It is also uncertain what percentage of induced remissions will be permanent and how many will require follow-up or maintenance therapy. To what extent thiouracil treatment will obviate the need for thyroidectomy is still unknown. In cases in which surgical treatment is definitely contraindicated because of the patient's advanced age, his lack of a goiter, his poor general condition, or the fact that he has already been operated on without benefit, it seems well established that thiouracil is much more promising as an arresting agent than anything we have ever had before.

Unless, in addition to thiouracil, iodine is given immediately before thyroidectomy, the use of this new preparation makes the surgeon's task more difficult because it renders the gland more friable and vascular; that is, it aggravates a condition which already existed, and one which only iodine can alleviate. It should be remembered, also, that iodine inhibits the action of thiouracil to some extent, so that, if the former has recently been used, one must give thiouracil over an unusually long period before any conclusions concerning its effect can be drawn.

In trying to decide whether or not thiouracil is superior to subtotal thyroidectomy in the treatment of Parry-Graves' disease, one must consider



the relative mortality rates, the toxic reactions, and the incidence of failure and recurrence. The mortality rate after thyroidectomy, including death from thyroid crisis, seems to be, on the average, somewhat higher than that which can be attributed to thiouracil. The only serious adverse reaction to surgical treatment is thyroid crisis, and, by careful selection of cases and meticulous preoperative preparation, the incidence of this usually fatal complication has been reduced almost to the vanishing point. Such is not the case, however, with thiouracil. The adverse reactions to this drug include fever, dermatitis (principally urticaria), jaundice, anemia, purpura, leukopenia, and granulocytopenia. Outstanding among these is agranulocytosis, which may develop suddenly and irrespective of the dose of the drug. This means that total and differential leukocyte counts must be made at frequent intervals. When a definite tendency toward leukopenia and loss of granulocytes becomes manifest, the drug should be discontinued; the patient should receive blood transfusions and be placed under the protective action of penicillin in a dose of 500,000 to 1,000,000 units per day. There is no convincing evidence that the administration of pyridoxine, pantothenic acid, folic acid, vitamins, or pentnucleotide exerts any prophylactic effect against the development of agranulocytosis. The other toxic reactions are of minor importance, although they may necessitate discontinuance of the drug.

It is still too early to make any definitive statement about the incidence of recurrence and relapse after thiouracil therapy. Also, it is difficult to arrive at an accurate estimate of the rate of recurrence after subtotal thyroidectomy, but from the data which are available, it would seem that the two methods of treatment are about on a par in this respect.

In conclusion, it seems safe to say that the introduction of thiouracil in the treatment of Parry-Graves' disease marks a distinct advance. Furthermore, it has stimulated investigation which may lead to a better conception of the pathogenesis of the disease. On the other hand, the advent of thiouracil has not yet rendered all other methods of treatment obsolete, as some would have us think.

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#### Discussion

**Dr. Lyle Carr, Iowa City:** To date, more than fifty patients have been treated with thiouracil in the Department of Internal Medicine at the State University of Iowa Hospitals. In general, our results agree with those presented by Dr. Korn. Our cases consisted of patients with typical exophthalmic goiter, as well as those with simple, diffuse, and nodular goiters.

I would like to present three typical cases of thyrotoxicosis who received thiouracil.

The first was a 40-year-old housewife who, when first seen, presented the typical picture of exophthalmic goiter with a diffusely enlarged thyroid gland. Her admission basal metabolic rates were +50 and +48 per cent respectively. She received .4 gram thiouracil daily given as .2 gram at 8 a. m. and .2 gram at 8 p. m. Her rate of oxygen consumption was steadily lowered so that in two weeks her basal metabolism rate was within normal limits. After four weeks we reduced the drug to .1 gram twice daily, in six months to .1 gram daily and in ten months to .1 gram every other day. Throughout all of this latter period her basal metabolic rate was normal, and her activity was unlimited following the first month of treatment. At the end of thirteen months of continuous treatment, as she was subjectively and objectively well, thiouracil was discontinued. Up to six months after thiouracil was discontinued or nineteen months after treatment was begun she has shown no signs and there have been no symptoms of an exacerbation.

Case number two is a 73-year-old woman who had a "goiter" all of her life but gave a two-year history of progressive symptoms of shortness of breath, heat intolerance, excessive perspiration, and weight loss in the face of an increased appetite. She had received iodides for three weeks prior to her admission and in spite of this, her entrance basal metabolic rates were +37 per cent and +34 per cent. She was given .6 gram of thiouracil daily, receiving .3 gram morning and night for two weeks. At that time her rate of oxygen consumption was within normal limits, but she was continued on .2 gram thiouracil twice a day for the next three weeks and then reduced to .1 gram two times daily. She was discharged after five weeks but continued her medication at home for only two weeks because she had what she described as a "twitching spell." She did not report this, however, and upon returning two and one-half months later, her basal metabolic rate was normal. After three weeks, during which .4 gram of thiouracil was administered daily, a thyroidectomy was performed because of tracheal encroachment. There was no thyroid crisis, but one week after the operation she developed bronchopneumonia and subsequently also survived a mild attack of cardiac failure. Her basal metabolic rate was still normal when she was seen seven months after her thyroidectomy and she was having no difficulty.

Case number three is a 48-year-old housewife with a one-year history of thyrotoxic symptoms

whose admission basal metabolic rates were +54 per cent and +64 per cent. She received .3 gram of thiouracil morning and evening for two weeks. At the end of this time, however, she developed a temperature of 102 degrees and thiouracil was discontinued as no other explanation presented itself. The temperature promptly subsided and after a three-day interim, during which she was afebrile, three .2 gram doses were administered. Her temperature promptly rose to 102 degrees. The drug was discontinued and her temperature returned to normal. Our impression was that the febrile episode was probably a manifestation of sensitivity to thiouracil. The patient was prepared with Lugol's solution and transferred to the department of surgery where a thyroidectomy was performed.

Case number one is an example of an average case of thyrotoxicosis treated in our clinic. We feel that the thiouracil enabled this patient to live normally for the past nineteen months so that she now has either passed through the active phase of her thyrotoxicosis or she is in a remission induced by thiouracil. In either event she may revert into increased thyroid activity at any time but so far has shown no evidence of doing this.

In example number two, thiouracil brought a 73-year-old woman's rate of oxygen consumption to normal. This changed her from a poor surgical risk to an old individual who, although not a good surgical risk, did not have an elevated metabolism.

Case number three is a patient in whom sensitivity to thiouracil, as manifested by a temperature elevation, was suspected, and in whom that suspicion was confirmed by repetition. It is an example of one of the signs of toxicity to thiouracil which makes the use of this drug in every case of thyrotoxicosis impractical. It is, however, a valuable drug and will probably find widespread use.

## RUPTURED INTRACRANIAL ANEURYSMS

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Meningeal bleeding of nontraumatic origin has, in the past, been designated by the term "spontaneous subarachnoid hemorrhage." As we indicated in a previous article,<sup>1</sup> this term is meaningless and confusing and should be discarded, because, in the vast majority of these cases, a ruptured intracranial aneurysm is responsible for the extravasation of blood into the subarachnoid space. This syndrome was accurately described by Symonds<sup>2</sup> as early as 1923, and there are many excellent reviews of the subject in the literature. It is, therefore, surprising that this disorder so frequently still escapes recognition. The clinical features are usually sufficiently definite to enable one to make the correct diagnosis.

Our attention centers mainly on the vessels of the circle of Willis and their adjacent branches. It may be well to consider briefly the developmental history of these vessels in relation to aneurysm formation. In the 5 millimeter embryo the brain already exhibits the three primary vesicles, forebrain, midbrain and hindbrain, and is bent so that the morphologic tip, carrying the optic vesicles, points caudalward. The first branch of the aortic arch forms the trunk of the future internal carotid artery, and, growing rostrally, encounters the optic vesicle first. Branches form above and below the optic vesicle and continue along the under side of the brain, following its lesser curvature as far as the base of the hindbrain, joining a nest of capillaries at this point. Ultimately the circle consists of a maze of anastomotic branches, many of which must be obliterated and absorbed before the final pattern of the circle of Willis becomes established. The persistence of remnants in the form of little protrusions, where absorption is incomplete, is now accepted as an important cause of miliary or berry aneurysms.<sup>3</sup> Another possible cause of these formations is the spreading of the angle of bifurcation of cerebral vessels produced by the rapid growth in size of the brain. The increase in the angle of bifurcation causes the force of the blood stream to be thrown directly against the angle, which is weakened by the failure of the muscle layer to grow in to support the intima.

The majority of these aneurysms occur at bifurcations. The famous case of Forbus<sup>4</sup> showed aneurysms apparently arising from bifurcation defects at three points in the circle of Willis, and one aneurysm (the one which ruptured and caused the death of the patient) was apparently situated on an unobliterated vascular remnant. In addition to the lesions of the circle of Willis, there may be associated disorders in other portions of the body. Polycystic kidney disease<sup>5</sup> and coarctation of the aorta<sup>6</sup> are examples of such accompanying diseases.

It is now generally recognized that these congenital aneurysms are the most frequent cause of nontraumatic subarachnoid hemorrhage. Arteriosclerosis probably ranks much farther down the list than was formerly believed, while mycotic aneurysms are rather rare and syphilis plays a very minor role.

The most common finding at autopsy is a mass of clotted blood which fills the subarachnoid space usually at the base of the brain. A variable amount of blood is extravasated over the convexity. The blood may break into the ventricular system, as well. Occasionally the blood will dissect through a lobe of the brain, and rarely may rupture into

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the subdural space. Sometimes the aneurysm can be found without difficulty in the mass of clotted blood. I would, however, emphasize the importance of fixing the entire brain in formalin if the source of the bleeding cannot be ascertained at once. In many instances the aneurysm will be found only when careful dissection of the circle of Willis and its branches is carried out after the brain is properly fixed.

Microscopically, the wall of the aneurysm is thin. There is a process of progressive stretching and thinning until a rupture occurs. In most instances the aneurysmal sac takes various stains poorly; hyalinization is common. The intimal lining is usually intact up to the point of rupture. It is possible, with elastic tissue stains, to demonstrate the presence of an internal elastic membrane, which becomes very attenuated and defective, particularly near the point of rupture. Occasionally one finds bits of media, but the amount of muscle tissue is so small as to be almost valueless from the functional standpoint. In most instances, no inflammatory reaction is seen. A few of our specimens have revealed some involvement of the aneurysm wall by inflammatory cells, principally lymphocytes, but this reaction has been interpreted as a nonspecific response to progressive stretching of the vessel wall. Any atherosclerotic changes which are present seem to be incidental in this particular group.

We have had the opportunity to study one hundred eleven cases clinically in the past twelve years. The condition occurred in fifty-eight males and fifty-three females. It is a disorder which becomes manifest most frequently in middle age. The average age of our patients was 43. The oldest individual in our series was 72, and the youngest was 14. The incidence by decades is as follows: First decade, 0; second decade, 6; third decade, 8; fourth decade, 31; fifth decade, 27; sixth decade, 30; seventh decade, 7; eighth decade, 2.

In only twenty-six of our patients did some unusual mental or physical strain precede the rupture. The majority of bleeding episodes occurred during ordinary physical activity, or while the patient was at rest.

The onset of the hemorrhage is usually abrupt. Characteristically, there is sudden severe pain in the back of the head and neck. The headache is usually of a diffuse type, but in some cases the pain takes a definitely localizing character in one temple or behind the eye. Nausea and vomiting occur with considerable frequency, and convulsions occur occasionally. The convulsions are usually generalized in type. Various alterations in

the state of consciousness are seen, so that one encounters all gradations ranging from drowsiness to stupor and coma.

The clinical signs are usually quite typical. When blood is extravasated into the subarachnoid space, it gives rise to signs of meningeal irritation, namely, stiffness of the neck and positive Kernig's sign. There is usually a mild febrile reaction which lasts while the blood is being absorbed. A rise of temperature to 103 or 104 degrees Fahrenheit, in the absence of intercurrent infection and in the presence of increasing coma usually indicates intraventricular bleeding. Hemiparesis is caused by laceration of brain substance by effused blood or by softening of the brain in the area supplied by the involved vessel. Various ocular palsies and disturbances of vision may take place, depending on the location of the aneurysm. It is a rather common experience to find no localizing signs whatsoever.

A lumbar puncture offers the most reliable diagnostic aid during the acute period. Within a short time after the blood is extravasated into the subarachnoid space it can be recovered from the lumbar region. The spinal fluid becomes uniformly bloody; in other words, the last tube removed will be exactly as bloody as the first. Recognition of this fact will allow the examiner to discount the possibility of the occasional "bloody tap" produced by technical difficulties. In the latter condition, the fluid tends to clear as successive tubes of fluid are removed. In a case of true subarachnoid hemorrhage, if the puncture is performed a week or more after the bleeding has ceased, the fluid will be xanthochromic. If moderate bleeding persists for days or weeks, the supernatant fluid will be xanthochromic and the sediment will consist of various quantities of red cells.

Ordinarily the differential diagnosis of this condition is not difficult. The onset of pain in the head, symptoms and signs of meningeal irritation, the presence of blood in the spinal fluid with or without focal signs, usually constitute sufficient evidence on which to make the correct diagnosis clinically. Differentiation from the type of subarachnoid hemorrhage occurring after trauma should present no unusual diagnostic difficulties. In practically every instance of ruptured intracranial aneurysm the patient is able to protect himself from falling. The appearance of bleeding into the subarachnoid space during the course of subacute bacterial endocarditis or one of the other septicemias indicates the likelihood of a mycotic intracranial aneurysm. Most of our difficulties have arisen in connection with primary intracerebral hemorrhage with bleeding into the ventricular

system and subarachnoid space. In intracerebral hemorrhage the depression of consciousness is usually more severe and abrupt, and the paralytic signs are more apparent from the very beginning of the disease. Even though certain general criteria can be laid down, however, the differentiation may not always be possible.

Rupture of an intracranial aneurysm is a very serious disorder, as the statistics will indicate. Thirty-one of the one hundred eleven patients who entered the University Hospital with this type of bleeding died in the hospital. This is a mortality rate of 28 per cent. This figure is somewhat lower than that generally found in the literature because of the distances involved in the transportation of patients. Magee<sup>7</sup> indicated that 34 per cent of his patients died in the primary attack, and 22 per cent in subsequent attacks. Wolf and his associates<sup>8</sup> reported an initial mortality rate of 11 per cent, and a recurrence mortality rate of 22 per cent. Deepening of coma, a rising temperature, and persistence of gross blood in the spinal fluid are ominous signs. The mortality rate is highest in older persons, and in those who have arterial hypertension.

An attempt has been made by certain authors to calculate the likelihood of recurrence if the patient survives the initial attack of subarachnoid bleeding. Magee<sup>7</sup> reported recurrences in fifty out of a total of one hundred fifty patients, with the death of thirty-two patients in the recurrent attacks. Wolf et al.<sup>8</sup> noted that twenty-four out of a total of forty-six patients had recurrences. Of the twenty-four patients, ten died. These figures indicate that more than one-third of all patients will have recurrences, and that perhaps half of this group will die. The incidence of recurrence is greatest in the first two months after the initial hemorrhage. Approximately 50 per cent of all the patients with ruptured aneurysms will survive, but there will be significant sequelae, such as severe headaches, dizziness, and paralysis, in approximately one-half of this group.

The management of subarachnoid hemorrhage has been extensively reviewed by Sands.<sup>9</sup> Symptomatic measures should be employed during the acute period. Absolute rest in bed is indicated, and analgesic rather than hypnotic drugs should be employed. The use of repeated spinal drainage is a therapeutic measure of doubtful efficacy. We feel that a diagnostic lumbar puncture is indicated; after that one might be justified in performing an occasional lumbar puncture to determine whether there is continued bleeding into the subarachnoid space.

The real problem concerns that group of patients which is admitted during the first and second week after an episode of bleeding. This group should have active investigation. An attempt should be made to localize the ruptured vessel. The majority of these lesions are situated around the anterior portion of the circle of Willis, an area which includes the internal carotid, middle cerebral, anterior cerebral and anterior communicating arteries. A clue can sometimes be gained by noting the site of onset of the pain, the presence of visual field defects, involvement of the cranial nerves supplying the rotators of the eyes, or weakness of one side of the body. A bruit is not heard over these aneurysms. With or without clinical localizing signs, the question of diagnostic arteriography and possible intracranial exploration then arises.

At the present time intracranial angiography is a well established and relatively safe procedure. List, Burge, and Hodges<sup>10</sup> reported a series of one hundred twenty-seven patients in whom intracranial angiography was performed, with no fatality attributable to this procedure. This diagnostic aid, however, is not without danger. Convulsions and hemiplegia have been known to occur after intracranial arteriography. The technic is rather exacting; thorotrast or diodrast is injected by the surgeon directly into the internal carotid artery after this vessel has been exposed in the neck by the surgeon. Immediately after the dye is injected, films of the skull are taken. When an aneurysm can be visualized, craniotomy should be done if the aneurysm appears to be located in an area which might be accessible to the surgeon. If the arteriograms are negative and if there are no localizing signs there would be very little chance of finding the aneurysm surgically. Dandy<sup>11</sup> has reported an operative mortality of 25 per cent in intracranial aneurysms. As neurosurgical experience grows, this figure should drop even lower.

If the patient first comes under observation more than two months after his first episode of hemorrhage, if he has had no recurrence of bleeding, and if there are no localizing signs, conservative treatment is in order. Most patients will elect to be handled conservatively after the first two months if it is shown that the operative mortality is higher than that resulting from conservative management. The critical period is, therefore, the first eight weeks after the initial episode of hemorrhage. It can be predicted that an increasing number of these aneurysms will be attacked surgically as the recognition and localization of such lesions become more skilled.



## CONCLUSIONS

1. Meningeal bleeding of nontraumatic origin is most frequently due to a ruptured congenital aneurysm of the circle of Willis.

2. These aneurysms are caused by incomplete absorption and obliteration of vascular branches during the embryologic development of the circle of Willis, and they occur most frequently at bifurcations in the anterior portion of the circle. The onset of bleeding, however, does not usually occur until adulthood.

3. The clinical features are now easy to recognize. Characteristically, they are headache, stiff neck, positive Kernig's sign, and uniformly bloody spinal fluid.

4. Approximately 30 per cent of patients with this disorder will die in the first attack, and an estimated 20 per cent will die in subsequent attacks.

5. More active investigation should be carried out in the group which survives the initial episode of subarachnoid hemorrhage. Localization of the aneurysm is possible by clinical and angiographic means.

6. The treatment during the acute phase is principally symptomatic. Absolute rest in bed is indicated, and analgesic drugs should be employed. Repeated lumbar punctures are of doubtful efficacy. Some of the patients with localizable aneurysms can be improved or cured by surgical means.

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## Discussion

Dr. Harold W. Morgan, Mason City: Dr. Sahs' discussion of the embryology is most interesting as an explanation for ruptured intracranial aneurysms and the lesion is much more understandable with this background in mind. I have found three ruptured aneurysms at autopsy, and it is interesting to note that in two of these cases I was able to antic-

ipate the findings from the clinical history of the cases. I have been privileged to follow one clinical case which survived in association with Dr. Swanson of Mason City. As far as history and physical findings are concerned, I have nothing to add.

There is one question which was not discussed by Dr. Sahs which I wish to raise. That is the medicolegal significance of these cases. My first experience with the lesion was a result of a very slight accident in which compensation was involved. The ruptured aneurysm was found and no causal relationship between the rupture and the accident was present. There was no sign of injury to the scalp or calvarium. Another one of my cases was done on the coroner's service and involved a 29-year-old woman who first complained of severe headache at a dance. She was able to walk home, but the attack increased in severity. She became comatose, had convulsive spasms of the extremities, lapsed into unconsciousness, and died in approximately eight hours. Again no evidence of traumatic injury was present. The third case which I wish to present is of longer duration and three separate hemorrhages occurred during the course of six weeks. At the time of autopsy both old and recent hemorrhagic changes were found in the brain.

It is important in viewing medicolegal autopsies to be able to differentiate hemorrhage from ruptured cerebral aneurysm from subdural or extradural hemorrhages resulting from fights or falls as these may lead to criminal charges. The history is usually helpful. The absence of unusual activity, the absence of bruises or contusions or fractures of the skull all should lead one to investigate carefully for the possibility of a ruptured cerebral aneurysm.

SUBACUTE BACTERIAL ENDOCARDITIS  
IN A PATIENT WITH CONGENITAL  
HEART DISEASE

## Cure With Penicillin

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The report of a cure of a case of subacute bacterial endocarditis with penicillin is no longer in itself of compelling medical interest. An increasing number of such cases is being reported and the possibility of curing endocarditis with penicillin is now thoroughly established. Interest in further case reports lies in an accumulation of data regarding dosage of penicillin, its route of administration, the susceptibility of various organisms to the drug, and the proper duration of therapy.

Treatment with penicillin still is largely empiric. Especially in severe infections such as endocarditis, dosage levels at first suggested (and those still appearing in some suggested outlines of treatment) are inadequate, but it has not been determined just what constitutes adequate therapy.

The present case is reported because it shows quite clearly that the treatment first employed was inadequate, and that amazingly quick results were secured when the dose was pushed to a height which, at the time, was not advised in the medical journals. In recent case reports, similar or even higher doses have been recorded.

The patient's illness began in January, 1945. He was then 37 years old. His parents were told when he was 2 or 3 years old that he had a heart lesion and that it was doubtful if he would reach adult life. There were no spells of cyanosis. In grade school and high school he did not take part in organized athletics, but in no other way was his activity curtailed. At 16 years of age he worked during the summer on a railroad section gang, and while in college he worked summers as a fireman on lake boats. After finishing college he went into academic work, and he has continued as a member of a college engineering staff. Except for occasional respiratory infections, his general health had been good.

On January 7, 1945, he was seen by one of us. He complained of aching in his neck and back and general malaise. His temperature was 101 degrees. There had been no preceding sore throat or other respiratory infection, and there were no physical findings which aided in diagnosis of the infection then present. He was treated symptomatically with a salicylate preparation.

In the next week his specific complaints of aching disappeared, but he continued to have temperature elevation of 101 degrees to 101.6 degrees daily, and he felt ill. His white blood count was nine thousand with 80 per cent polymorphonuclear leukocytes. The urine was negative. His heart was enlarged and there was a rough murmur continuous throughout systole and diastole heard over most of the precordium but loudest along the left sternal border. As is frequently the case with congenital heart disease, it was impossible to be certain of the type of lesion present, but the physical signs suggested chiefly an interventricular septal defect. It was not possible to determine whether or not any changes were taking place in the character of the cardiac murmur. No petechiae were observed.

Agglutination tests taken at the end of the second week were negative for Malta fever, typhoid, and paratyphoid. At this time it was strongly suspected that we might be dealing with endocarditis, and the patient was admitted to the hospital. The first two blood cultures were negative. At this time the civilian supply of penicillin was low and its distribution was administered by a state committee. We secured a small supply

and started the patient on 30,000 units intramuscularly every three hours. His temperature, which had been spiking to 101 degrees or more daily, showed no elevation over 99.6 degrees while he was receiving penicillin. However, a blood culture taken during this period was positive for *Streptococcus viridans*.

Penicillin was stopped after five days because the supply was exhausted, and within 48 hours his temperature was 102 degrees. On February 16 a new supply of penicillin was secured and we started a new schedule of 200,000 units per twenty-four hours, given by continuous intravenous drip. Again his temperature dropped, and during six days the highest elevation was 99.8 degrees. On the seventh day he complained of pain in the right chest, posteriorly. Nothing was found on physical examination, but for four days he had a temperature elevation to 100 degrees or higher.

In the next two weeks this course of events was repeated twice. The patient would have several days of almost normal temperature, then there would be a complaint of pain, once in the left leg, and the other time in the right chest. On both occasions temperature rises were recorded for three to four days and the patient looked quite ill.

On March 15, penicillin was stopped as there was again an interruption in our supply. His highest temperature from March 11 to March 15 was 99.8 degrees. On March 16 his temperature was 101.6 degrees and he developed a severe generalized urticaria. The penicillin had been stopped at 5 p. m. one day and hives were first noticed at 6 p. m. the next day. He continued to have urticarial lesions through March 22 and had daily temperature elevations.

On March 23 his temperature was 103 degrees. He complained of sudden pain in the right chest made worse by breathing and expectorated a small amount of blood-streaked sputum. It seemed evident, from the preceding six weeks experience, that penicillin in doses up to 200,000 units daily had some transitory effect on his infection but failed to control it. We decided on what then seemed an heroic dose, namely 1,000,000 units daily by continuous intravenous drip. As we were uncertain of the cause of his urticaria, he was given a few small doses of penicillin intramuscularly and when this did not provoke any reaction, the intravenous drip was started. On March 24 his temperature was 102 degrees, and that was his last significant temperature elevation.

The dose of 1,000,000 units daily was continued until April 1, when it was reduced to 600,000; and in the subsequent week it was further reduced to 400,000 and finally to 300,000 units. On April



8 the intravenous drip was discontinued and for two weeks the patient was given 25,000 units intramuscularly every three hours. Medication was stopped on April 23 and the patient was discharged from the hospital April 28.

He has been seen at frequent intervals in the past eight months. In September he began teaching on a part-time basis; in November he went on a full-time schedule. His sedimentation rate has varied from 6 to 10 millimeters. When last seen on March 1, his hemoglobin was 14.6; sedimentation rate, 6 millimeters.

#### COMMENT

After the sulfonamides had been employed for two or three years it became apparent that inadequate doses of these preparations might produce sulfonamide resistant micro-organisms. The same development may take place in the field of penicillin therapy. In recent reports on the use of penicillin in the treatment of subacute bacterial endocarditis, cases are recorded in which Streptococci acquired increased resistance to penicillin when subcurative doses were employed.

When penicillin was first used in the treatment of endocarditis, daily doses of 200,000 to 300,000 units were suggested. The optimum dose still is not known and undoubtedly it will vary with the etiologic organism. Flippin<sup>1</sup> suggests 500,000 units for at least five weeks. Loewe et al.<sup>3</sup> report on the isolation of a newly recognized variety of non-hemolytic Streptococcus from cases of endocarditis. This strain was found highly resistant to penicillin and the authors suggest use of two million units daily in the treatment of infections due to this organism.

It seems imperative, in view of these reports, that in a case of endocarditis the organism should be isolated and identified as quickly as possible. Technics have been developed for determining susceptibility of organisms to penicillin in vitro. This determination is not easily available to practitioners at present, nor is it apparent as yet just what conclusions in regard to proper therapy can be drawn from this laboratory data. Until more is known about the susceptibility of various strains of Streptococci, it would seem wise in any case to give not less than 500,000 units daily in a case of endocarditis. Treatment for the first week or two with one million units might be wiser.

There is also uncertainty regarding the proper route of administration of penicillin in endocarditis. It was thought at one time that continuous intravenous drip was preferable because it might provide a more sustained blood level. Flippin et

al.<sup>1</sup> and Bloomfield and Halpern<sup>2</sup> believe that large doses given intramuscularly every three hours are as effective as intravenous drip, and back this opinion with clinical and laboratory observations. Loewe et al.<sup>3</sup> seem to favor continuous intravenous drip for infections due to the special strain of Streptococcus which they describe, but they give no data to support this viewpoint.

Intravenous drip presents technical difficulties in some patients, and if the intramuscular route is as effective, it probably is the one which should be employed. Our patient almost preferred the intravenous route and in the cooperative patient with good veins it may provide a welcome relief at intervals from repeated intramuscular injections.

The significance of the urticaria in this case is not known. Urticaria occurring in the course of penicillin therapy has been described and it has not been considered a contraindication to continuing therapy. This patient had never before had urticaria. It seemed unlikely that it represented sensitivity to penicillin. Urticaria is believed to be dependent on infectious foci in some cases and it seemed at least possible in this case that the urticaria was related to the flare-up in temperature which occurred when penicillin was stopped.

#### CONCLUSION

A report is made of the cure with penicillin of a case of subacute bacterial endocarditis occurring in a patient with a congenital heart lesion.

The patient was first treated with 200,000 units daily and when this proved inadequate, the dose was increased to 1,000,000 units. The patient has been followed for a year and shows no evidence to date of recurrence.

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## A SURVEY ON THE USES OF PENICILLIN IN DISEASES OF THE EYE

MERRILL O. EIEL, M.D., Osage  
HISTORY

The discovery of penicillin, which is described as accidental, was actually the result of a lifelong study of antibiotics by Alexander Fleming.<sup>1</sup> His interest in bacterial inhibitors led him to investigate an area of lysis of staphylococcal colonies surrounding a mold growth which had contaminated the *Staphylococcus* culture. As a result of this observation, Fleming,<sup>1</sup> in 1929, published a report on the mold, naming it *Penicillium notatum* which, when grown on ordinary nutrient broth, produced a powerful antibiotic to which he gave the name penicillin. In 1932, Fleming<sup>2</sup> further discussed the use of penicillin experimentally, showing it to be nontoxic in animals, and recommended its use in diseases caused by sensitive bacteria. He also suggested its use on surface wounds, and indicated its possible value in war surgery.

Little interest in this antibiotic was aroused until 1939, however, when R. J. Dubos<sup>3</sup> published a report on the antibacterial effect of an extract of soil bacillus. This renewed interest in antibiotics. In 1941, Florey<sup>4</sup> and his associates revived interest in penicillin and sufficiently purified it for clinical use. His favorable reports, plus the need brought about by the war for such a remedy, induced several large commercial companies in this country to undertake mass production of this needed drug.

### CHEMISTRY

Penicillin is an organic acid which reacts chemically to form salts and esters. The sodium and calcium, the most generally used, are soluble in water, salt solution and 5 per cent dextrose, the calcium salt being more stable and less hygroscopic than the sodium. The actual chemical formula has not been definitely determined. Efforts are constantly being made to purify penicillin further, and the drug in use today is about 65 per cent pure. This is remarkable progress when we consider that the penicillin of three years ago was 10 to 15 per cent pure. Some investigators are trying to produce an absolutely pure synthetic penicillin.

### ANTIBIOTIC ACTION

Penicillin occupies a unique position in its antibiotic activity. Chemical antiseptics are usually protoplasmic poisons, destroying not only bacteria, but

leukocytes and tissues as well. By contrast, penicillin is not a protoplasmic poison but, by inducing morphologic changes, affects bacterial biologic and reproductive activity. This action appears to be mainly bacteriostatic according to Harper,<sup>5</sup> but Hobby<sup>6</sup> and her associates found that penicillin may either act as a bacteriostatic agent or, under ideal conditions, have true bactericidal effects. Organic matter appears to affect in no way the activity of penicillin. Florey<sup>4</sup> and associates have shown that large amounts of bacteria, blood, and tissue autolysates do not impair its action. These facts give it a decided advantage over the sulfonamides. F. T. Tooke<sup>7</sup> found penicillin to be nontoxic to ocular tissues and efficient in the presence of blood, pus, or ocular fluids. He concluded it was a valuable agent for extra-ocular and intra-ocular use in diseases due to sensitive organisms.

Ordinarily sensitive organisms can become penicillin resistant as shown by Rammelkamp and Maxon.<sup>8</sup> McKee<sup>9</sup> and associates confirmed this and further demonstrated that although organisms become resistant, at the same time they become markedly less virulent. This again gives penicillin a decided advantage over the sulfonamides where organisms retain their dangerous virulence though sulfonamide resistant. Furthermore, resistance to the sulfonamides is not accompanied by decreased sensitivity to penicillin.

### BACTERIOLOGY

Penicillin appears to be more or less specific against aerobic and anaerobic gram-positive bacteria. Against gram-negative bacteria it has little effect, except for the three gram-negative Cocci: gonococcus, meningococcus, and *Micrococcus catarrhalis*. J. E. L. Keyes<sup>10</sup> expressed his belief that it is the drug of choice in eye diseases caused by gonococcus, *Streptococcus* and sensitive *Staphylococcus*. He further advises its trial in eye infections associated with diphtheria, actinomycosis and gas gangrene. J. H. Dunnington and L. Von Sallmann<sup>11</sup> found penicillin effective against eye infections due to pyogenic Cocci, gonococci, pneumococci, and the *Clostridium*s. Certain strains of *Staphylococcus albus* are known to be penicillin resistant. As a rule, however, it acts effectively on all *Staphylococcus* infections provided sufficient dosage is administered initially.

### SIDE EFFECTS

Whatever side effects are noted appear to be due to pyrogens and other impurities. In 1943 Keefer, et al.,<sup>12</sup> published a report stating that toxicity and reactions of a systemic nature were remarkably low, considering that at that time



penicillin was only 10 to 15 per cent pure. In order of their frequency in a series of five hundred cases, the following reactions were noted: 19 thrombophlebitis, 14 urticaria, 12 chills and fever, and 5 cases of fever alone. With the present 65 per cent pure penicillin, the occurrence of side effects is much less frequent and severe. In treating eyes we may find an occasional local reaction resulting from its use consisting of swelling and redness of the lids. Conjunctival redness and chemosis may also occur. These reactions may not be seen for several days or longer following treatment, and they rapidly subside after penicillin is discontinued. It has been suggested that the skin sensitivity may result from the presence of fungi in the penicillin. A patient who has become sensitized to fungi by having a mycotic infection of feet or hands may show a reaction because of the fungus impurities present in penicillin. In this type of case, a patch test is usually positive. Thus, the patient who appears to become sensitized to penicillin may, in reality, be sensitive to the fungus impurities.

#### METHODS OF ADMINISTRATION

Because of the extreme simplicity in applying penicillin in the eye, we have the opportunity to observe its effect first hand. For local use it can be applied to the eye as crystals, in solutions, or in ointments. Compared with the dosages required in other branches of medicine, the amount necessary for adequate treatment is small. Early reports recommended a smaller concentration of penicillin when used in the form of drops than do later reports. Arnold Sorsby and Elizabeth Hoffa<sup>13</sup> reported that in a series of gonorrheal ophthalmia cases in which different concentrations of penicillin were used, they found the concentration approaching twenty-five hundred units per cubic centimeter more effective and curative. Corneal bath or lavage is recommended by John G. Bellows<sup>14</sup> in the more severe eye infections involving the anterior segment. This is accomplished by means of an eye cup or plastic lens. He further advises the use of penicillin ointments in the eye in the low-grade infections where prolonged application is desired. Ludwig von Sallmann and Karl Meyer,<sup>15</sup> who compared the concentrations in the aqueous after ion transfer and after corneal baths, found the concentrations ten times greater after ion transfer. This greater concentration in the aqueous lasted four hours while that following the corneal bath lasted but two hours. According to a later report, the results of these experiments produced very gratifying results in the treatment of severe anterior

segment infections. B. W. Rycroft<sup>16</sup> found that subconjunctival injections of four thousand units per cubic centimeter produced bacteriostasis in the aqueous in one-half hour. He suggested that this might be true in the vitreous as well and concluded that subconjunctival injection should be used early and in full dosage, not only for its effective control of anterior segment infection but also to avoid the risk of producing penicillin resistance.

Rycroft<sup>17</sup> also described a technic of aspiration and replacement in order to obtain a higher concentration in the aqueous and vitreous. Two minims of aqueous were withdrawn and replaced with a like amount of penicillin dissolved in water using a concentration of one thousand units per cubic centimeter. The same technic was used in the vitreous. In his series satisfactory therapeutic concentration was reached by this method. V. LaRocca<sup>18</sup> found that an initial anterior chamber injection followed by daily subconjunctival injections produced a rapid cure in corneal ulcers with hypopyon. He concluded that intra-ocular injections of penicillin are not injurious, cause less local reaction and pain, and promote rapid recovery. Leopold<sup>19</sup> found through experimental study that all methods of administration produced a higher concentration in inflamed eyes than in normal eyes. Higher concentrations were also obtained in eyes which had iridectomies, indicating that the iris lens barrier prevents adequate filtration of penicillin from the aqueous to the vitreous. Subconjunctival and intravitreal injections were effective in posterior segment infections, while intravenous injections were found to be ineffective.

When penicillin is injected intravenously in large amounts, it reaches the eye ball in fifteen minutes. John G. Bellows<sup>14</sup> found concentrations greatest in the ocular tissue in descending order as follows: extraocular muscles, conjunctiva, sclera, chorioretinal tissues, and aqueous. Only a trace was found in the cornea, vitreous, and lens.

J. E. L. Keyes<sup>20</sup> found that parenterally administered penicillin is not secreted in the tears. This method of treatment, therefore, would not be applicable.

It is interesting to note that of the common drugs which might be employed for ophthalmologic purposes, the only one which seems to inactivate penicillin is adrenalin. A. J. Cameron and S. T. Cowan<sup>21</sup> studied the effect on the activity of penicillin by atropine, eserine, adrenalin, cocaine, silver protein and fluorescein. None but adrenalin appeared to have any effect on the anti-biotic activity. These experiments were performed

with *Staphylococcus* cultures mixed with small quantities of the aforementioned drugs.

In employing penicillin as adjunctive treatment in the toxin producing infections such as may be associated with diphtheria or tetanus, it should be remembered that the action of penicillin is antibacterial only. Thus, to neutralize the specific toxin present, it is necessary that antitoxin be administered.

If *Staphylococcus* is found to be the offending organism, the initial treatment should be intensive. As a rule, it is necessary to administer two to four times the usual dosage. Penicillin resistance develops early, so the dosage should be sufficient to subdue the infection rapidly and completely. *Staphylococcus aureus* responds favorably, but some strains of *Staphylococcus albus* are resistant to penicillin even when massive doses have been used.

#### REVIEW OF CASES OF OCULAR INFECTIONS TREATED WITH PENICILLIN

In penicillin we have an antibiotic which has a wide range of effectivity and an extremely low rate of toxicity. Its activity, being unaffected by large amounts of organisms, blood, or pus, is superior to the sulfonamides. Employing penicillin is a matter of special importance in the treatment of eye diseases because of the ease and accessibility of its application in infections which are largely caused by sensitive bacteria. Bacteriologic study should be practiced as consistently as possible in any acute or chronic eye infection, not only as a means of diagnosis, but also to establish the type of therapy indicated.

Acute infections of the lids, conjunctiva, cornea, and tear sac generally respond favorably to its use, principally by local applications. Spectacular results have been achieved in the treatment of gonorrheal ophthalmia of the newborn. Arnold Sorsby<sup>13</sup> had only two failures in a series of fifty-nine cases, and these two failures were thought to be caused by inadequate care. In most cases a clinical cure resulted in twelve to twenty-four hours. Allan Bloxson<sup>22</sup> suggested its use in the eyes of newborn babies to replace silver nitrate because of occasional failures which result from use of the latter. He reported that a case of gonorrheal ophthalmia which developed in a nursery responded rapidly and favorably to topical penicillin solution. The babies yet unaffected were treated prophylactically with penicillin drops, and no more ophthalmia developed.

In simple corneal ulcers, topical therapy will heal corneas in a shorter time than will routine care. In the more severe types, such as hypopyon

ulcers, it becomes necessary to introduce the penicillin into the aqueous by ion transfer, subconjunctival injection, or direct anterior chamber injection. V. LaRocca<sup>18</sup> reports two cases of this type in which the hypopyon disappeared in twenty-four hours following anterior chamber injection. Subsequent subconjunctival injection for eleven consecutive days resulted in healed corneas. David Alpert<sup>23</sup> reported a severe case of ring abscess of the cornea with hypopyon in which intra-ocular penicillin, combined with oral sulfadiazine, brought about a rapid cure. Here the causative organism was hemolytic *Staphylococcus* isolated from the aqueous.

The use of penicillin in nonspecific uveitis is not indicated unless the organism is definitely known to be sensitive to penicillin. Phillip Thygeson and C. J. Weigand<sup>24</sup> studied fifty-six cases of anterior and posterior uveitis which were treated intramuscularly with penicillin. In the acute early anterior uveitis, slight improvement was noted but no more than could be expected from routine care with atropine, heat, and foreign protein. Later they reported the use of penicillin ion transfer in eight additional cases of anterior uveitis. No more than the usual amount of improvement was noted in cases given simple routine care. The conclusion drawn by their findings suggests that penicillin sensitive bacteria are not ordinarily concerned in the etiology of nonspecific uveitis. However, Clyde R. Harner and Joseph G. Smith<sup>25</sup> reported favorably on the use of intramuscular penicillin in a case of acute iridocyclitis following a blast injury. This case had failed to show favorable response to the usual routine care, including foreign protein and typhoid therapy. It is probable, however, that the infecting organism was introduced from the outside by the blast injury, thus differentiating it from the ordinary type of infection found in uveitis. A. J. Elliott<sup>26</sup> reported favorably on a gonorrheal iridocyclitis treated by ion transfer. This was supplemented by a continuous intravenous drip of fifteen thousand units every three hours. The uveitis was associated with a gonorrheal arthritis. An interesting feature here was that the arthritis showed no improvement following continuous intravenous drops. This would seem to prove that penicillin, given parenterally, does not pass freely into joint cavities.

Deep extraocular infections such as orbital cellulitis respond rapidly to intravenous penicillin. A severe case cited by H. O. Sloane<sup>27</sup> resulted in rapid drop of temperature and recession of proptosis obviating surgical intervention. A. C. Krause and William Rosenberg<sup>28</sup> reported on the



use of penicillin in treating metastatic meningococcic endophthalmitis which affected both eyes to such a degree that the only vision was of hand movements at three feet. About three weeks after the onset, the prognosis seemed hopeless in spite of antimeningococcic serum, sulfadiazine, and typhoid therapy. Penicillin ion transfer daily for twenty-five days resulted in eventual 20/30 vision in the right eye. The disease had progressed so far that the left eye failed to regain any vision.

#### SYNERGISTIC ACTIONS

Sulfonamides and penicillin have synergistic action. Thus, in the more severe infections it is advantageous to employ both drugs. If resistance to the sulfonamides is known to exist, it does not contraindicate the use of penicillin. Ungar<sup>29</sup> found para-aminobenzoic acid and sulfapyridine markedly synergistic with penicillin. Concentrations of para-aminobenzoic acid which greatly increased the bacteriostatic effect of penicillin against *Staphylococcus aureus* had no effect on penicillin activity against *Streptococcus hemolysis*. Small concentrations of sulfapyridine, insufficient in themselves to affect the growth of *Staphylococcus* or *Streptococcus*, greatly increased the antibiotic effect of penicillin when they were used together. This fact suggests the possible advantageous combination of either para-aminobenzoic acid or sulfapyridine to combat serious *Staphylococcic* or *Streptococcic* infections. Sulfapyridine being used in these experiments indicates sulfadiazine may be used with equal success and less side effects.

Combining penicillin with para-aminobenzoic acid might be efficacious in combating resistant *Staphylococcus albus* infections, although in the above mentioned experiments *Staphylococcus aureus* was used.

Summers<sup>30</sup> advanced the theory of a synergistic action of vitamin C and penicillin in healing hypopyon ulcers. In the cases he studied, Summers was impressed with the marked healing effect that penicillin had on corneal ulcers and its lack of effect on the hypopyon. Administration of vitamin C produced prompt absorption of the hypopyon. He apparently used penicillin topically only, for no mention was made of subconjunctival and intra-aqueous injection.

#### CONCLUSIONS

The consensus of opinion seems to favor intensive local treatment. Too small doses and too brief therapy may result in failure or the development of penicillin resistance. Concentrations of one thousand to twenty-five hundred units per cubic centimeter are commonly used, but in the

more severe types of infection there should be no hesitancy in employing stronger concentrations. Instillations in the form of drops or baths as often as every half hour have given excellent results in gonorrheal infections and corneal ulcers. Ointments containing one thousand units per gram may be used where prolonged application is desirable. Penicillin crystals are used mainly for point applications such as in ulcers, localized infections, or injuries. Frequent drops or baths usually suffice in superficial conjunctival or corneal infections; in deeper infections involving the anterior segment, instillations may not be sufficient and should be supplemented with ion transfer, subconjunctival injection, or intra-aqueous injection. Infections of the posterior segment probably are more effectively treated with intravitreal injections. Extraocular infections of the more severe type will usually respond to intramuscular penicillin.

In studying the available literature it is interesting to note that differences of opinion exist in the methods of administration, concentrations used, and end results obtained, especially in the use of penicillin intra-ocularly. These demand further clarification, but as methods become more standardized, they will eventually become known.

Certain reports regarding the absorption and dissemination of penicillin in the eye are not easily understandable. An infected, abraded, or contused eye seems to absorb locally applied penicillin much more readily than a normal one. It has been found that a soft eye following an intra-ocular operation or injury absorbs even more penicillin if systemically injected. It is the opinion of some that the intra-ocular circulation has to be disturbed to increase absorption and filtration of penicillin.

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## College of Medicine

### CLINICOPATHOLOGIC CONFERENCE

May 27, 1946

#### ABSTRACT OF CLINICAL HISTORY

A white woman, 48 years of age, was admitted to the gynecology service on Feb. 4, 1946, complaining of soreness of the vulva, chills, fever, and diarrhea. These complaints were of six weeks' duration.

She had first been seen in this hospital for fifteen days in December, 1935, as a patient on the urology service, at which time a diagnosis of bilateral pyelonephritis and urethral caruncle was made. She was seen in consultation by a member of the medical service, who noted that the flank pains originated at the time of bowel movements and were sometimes associated with nausea and vomiting. Occasionally mucus was noted in the stools. A colon series was reported as "a slightly spastic transverse colon."

The interval history included the occurrence of right hemiplegia in 1941 with recovery in two weeks. For the last year and a half she had aver-

aged three to four stools a day, often getting up once at night. She denied the passage of blood. Six weeks prior to admission she had a sudden increase of symptoms, the diarrhea averaging four to six stools per day, and with it were associated some abdominal cramps and distention. This was diagnosed by her local physician as "intestinal flu." From the onset of this attack she had chills and fever with increasing weakness and lost an estimated thirty pounds of weight. Four weeks before admission she developed sores on the tongue, perineum, and particularly in the perianal region.

At the time of entrance, examination revealed a pale, emaciated white female, poorly oriented, with a slow, slurring speech. There were white patches on the buccal mucosa. Her chest and heart were not remarkable. The abdomen was somewhat distended and tympanitic. There was no evidence of tenderness or palpable mass. On neurologic examination, there was residual evidence of the right hemiplegia. Pelvic examination showed the vulva to be slightly swollen with a tender ulcerated area anterior to it. Small white plaques were noted on the vulva and in the anal region.

Urinalysis showed 1 plus pus cells per high power microscopic field with numerous granular casts. The hemoglobin was 9.5 gm. per 100 c.c.; erythrocytes, 3.2 million per cu. mm.; lymphocytes, 11,350. Special laboratory studies included x-ray examination of the chest and the gastro-intestinal tract. These were considered normal. Blood smears for malaria were negative. The concentrations of plasma proteins were: albumin, 1.80 gm.; globulin, 2.70 gm.; total, 4.50 gm. per 100 c.c. Three blood cultures were negative. Agglutination tests for bacillus typhosus, bacillus paratyphosus, and Brucella were negative. The blood Wassermann and Kline tests were negative. Repeated stool cultures were negative for Eberthella, Salmonella, and Shigella groups. Warm stools examined for amoebae were negative.

Five days after admission to the hospital the patient was transferred to the neurologic service, at which time the lesions of the mouth and vulva regions were practically healed. These were considered to be on the basis of pellagra. Two weeks after admission, an ano-vaginal fistula developed. During observation an abscess appeared between the rectum and labia with spontaneous drainage. Sigmoidoscopic examination revealed a granular appearance of the mucosa of the sigmoid and considerable mucopurulent material was noted. Microscopic examination of this material showed pus cells and red blood corpuscles. She continued to



have a remitting type of fever which did not respond to penicillin. The patient was transferred to the medical service but no diagnosis was made. Forty-two days after admission, she was transferred to the surgery department for explanation of an increase in her bowel symptoms. On the second day following the transfer she developed

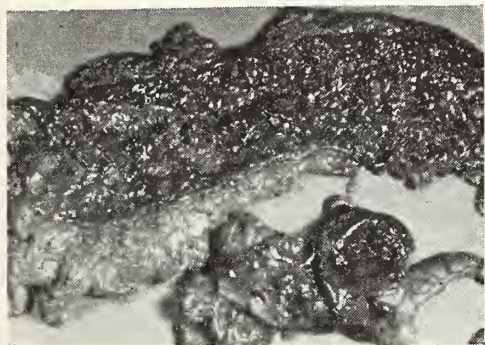


Fig. 1. Photograph of ascending colon showing extensive ulceration and hyperplasia of mucous membrane.

lower abdominal pain with signs of peritonitis. An emergency operation, performed through a lower right abdominal exploratory incision, revealed a generalized peritonitis, secondary to a perforation in the terminal ileum. The perforation was closed and a single-barreled ileostomy established. Postoperatively her condition remained precarious, and forty hours following operation she died from the progression of peritonitis.

#### CLINICAL DISCUSSION

*Dr. J. W. Dulin*, Department of General Surgery: The chills, fever, and prostration, together with the associated loss of weight and strength indicated an infection, primary or secondary, which had persisted for many weeks. The chronicity suggested a systemic pyogenic infection, bacteremia or septicemia. The bilateral pyelonephritis diagnosed in 1935 could still have been active and progressive, producing the severe toxic symptoms which were apparent at the time of admission. Her nutritional deficiency pellagra also might have occurred as a result of the chronic sepsis. The lesions of the mouth and the original sores on the perineum might be accounted for on the basis of the pellagra, because they healed promptly when the deficiency was corrected.

The most constant localizing signs and symptoms, however, were referable to the intestinal tract. The staff members were impressed with the story of diarrhea associated with cramping abdominal pains. The patient gave no accurate description of the character of the stools except that she denied the presence of gross blood.

Microscopic examination of material obtained from the rectum and sigmoid revealed pus cells and red blood corpuscles. She often had to get up at night because of the diarrhea. Such a history is suggestive of an inflammatory lesion which involves the colon. The inflammatory process could be within the colon or in close approximation to the distal colon.

A diarrhea with stools containing pus and blood suggests diverticulitis or polyposis of the colon, malignancy, or chronic infectious diseases.

Diverticulitis indicates an inflammatory reaction, secondary to diverticulosis. The inflammatory process may be confined to a single diverticulum, or multiple diverticula may be involved. At such times the bowel becomes inflamed and edematous with perhaps granulation tissue replacing a part of the bowel mucosa. One or more diverticula may perforate and be followed by pericolic abscess formation. While the diverticula may involve all of the large bowel, they are responsible for symptoms only in that part of the large bowel where the fecal stream is semisolid in consistency. Characteristically, diverticulitis appears in patients in the declining period of life. In most instances the patient is chronically constipated. Many of this patient's complaints could be explained on the basis of diverticulitis.

Multiple polypi of the colon, particularly of the congenital variety with pus and blood and typically, mucus, are likely to produce diarrhea. As this disease progresses, the symptoms of infection are more likely to appear. It is not improbable that there occurs an associated secondary infection responsible for the diarrhea. The age of this patient would make one consider rapidly advancing degeneration of polypi.

Coincident with the thought of polyposis of the colon comes consideration of neoplasm of the large bowel. There are very few of this patient's basic symptoms that could not be explained by a neoplasm of the large bowel. The chills and the fever and other infectious signs could easily be accounted for by a large fungating colic neoplasm and, more particularly, by a perforated neoplasm.

Infectious ulcerating lesions of the small and large bowel may be divided into the specific and nonspecific, and also into those involving essentially the small bowel or essentially the large bowel. Here we may eliminate the common acute enteritis of infectious type so often erroneously diagnosed as "intestinal flu." Our patient's story is of too long a duration to suggest this indeterminate group. The more specific typhoid and paratyphoid fevers were ruled out by the agglutination tests. Bacillary dysentery also was consid-

ered and special efforts were made to culture the dysentery bacillus. Because of the chronicity, a more likely cause of an ulcerating process in the colon is amebic dysentery. A patient with *Endamoeba histolytica* infection could exhibit pathologic changes identical with those described in this case. Although examinations of stools were repeatedly negative for amebae, it is common knowledge that multiple stool examinations frequently fail to demonstrate these organisms even in known cases.

The picture presented by this patient could also be produced by certain chronic granulomatous lesions of the colon. Tuberculosis is the most common disorder in this group. The infection is most frequent in the region of the ileocecal valve, the ascending and the transverse colon. It produces an extremely irritable bowel and may be diagnosed readily by the radiologist with a barium enema. Furthermore, tuberculous enteritis is usually secondary to active pulmonary tuberculosis. Lymphopathia venereum should be weighed in the differential diagnosis. It may produce sinuses and fistulae of the rectum and anal canal with or without abscess formation. This lesion is rare, however, in our clinic and the characteristic fibrosis and stenosis of the terminal large bowel, which always appears as the disease progresses, was absent in this case. Other chronic granulomatous lesions, including actinomycosis, need not be given serious deliberation.

Of the nonspecific inflammatory lesions of the intestinal tract, there are two which must be considered. So-called idiopathic ulcerative colitis usually involves the colon but may also involve the distal ileum. It is diagnosed by exclusion of the specific causes for ulcerative lesions. In over 90 per cent of these cases the disease begins in the sigmoid or rectum and progresses toward the right side of the large bowel. In 25 per cent the ileum is included in the late stages. Often it is a disease of remissions, and a remission may last for years. The general symptoms are those of any acute or chronic infection, depending upon the acuteness of the attack. The patients have fever, frequent chills, weakness, progressive anemia, weight loss, and sometimes nutritional disturbances including pellagra. They have cramping abdominal pains, tenesmus, and a foul type of diarrhea with varying amounts of pus, blood and mucus. In general, the higher in the colon the active disease is present, the more pronounced is the diarrhea. When the ulcerative colitis is limited to the sigmoid and rectum the patient may be constipated. The second of the nonspecific inflammatory

lesions is regional ileitis. Aside from the location, this nonspecific ulcerating enteritis is very similar in all of its manifestations to ulcerative colitis. It produces a profound systemic reaction leading eventually to invalidism. These patients may have the symptoms of partial obstruction with associated diarrhea, with pus and varying amounts of blood in the stool. It is likewise a disease of remissions. Classically, it is diagnosed by the finding of the typical "string sign" in the colon roentgenogram. There was no suggestion in this patient's colon series of ulceration and stenosis of the terminal ileum.

A prolonged septic course and associated symptoms of irritability of the colon may be secondary to any one of the many possible types of pelvic abscess. Tubo-ovarian abscess with mixed pyogenic organisms or even a pelvic appendiceal abscess could produce such a picture.

A major complaint of this patient was the infection in the region of the anus which progressed to an ano-vaginal fistula. Fistula-in-ano is secondary to perianal abscess. In the majority of instances the abscess starts from an abrasion in the anal canal. The usual fistula-in-ano occurs in a constipated individual and with the passage of a traumatizing stool, a break in the anal canal lining occurs allowing the passage of infected material into the surrounding cellular tissue. Foreign bodies such as bits of bone, toothbrush bristles and the like may be etiologic factors. An ulcer in the terminal large bowel, due to specific or nonspecific causes, is frequently associated with fistula-in-ano formation. Of the specific causes of ulcerating lesions in this region, there are few. In a patient with a story and findings indicating an ulcerating process in the intestinal tract and in whom a fistula-in-ano develops, one can be quite certain that the fistula is secondary to the primary disease. For example, in our own cases of surgically treated idiopathic ulcerative colitis, fistula-in-ano occurs in 25 per cent of the cases. A neoplasm of the anal canal could erode and produce a fistula. In this case the fistula was a centimeter in diameter; its margin was soft to palpation and had none of the palpable characteristics of malignancy. The cause might have been of a specific nature such as tuberculosis, but in our experience, tuberculosis of the anal canal and a true tuberculous fistula-in-ano is a rarity.

When this patient developed signs and symptoms of perforation of the gastro-intestinal tract, it was our impression that she had perforated the ascending colon. We felt the underlying pathologic process was ulcerative colitis.



*Clinical Differential Diagnosis:*

1. Ulcerative colitis.
2. Dysentery.
3. Parasitic infestation.
4. Regional ileitis.
5. Amebiasis.

## SUMMARY OF NECROPSY FINDINGS

The important lesions were found in the lower part of the intestinal tract. The ileum had been divided 20 cm. from the ileocecal valve, and both ends were brought to the surface through separate incisions. A perforation in the distal 4 cm. of the ileum had been repaired and showed no evidence of postoperative leakage. The mucosa of the terminal 6 cm. of the ileum, cecum, and the ascending and transverse colon was dull in luster, greenish gray in color, and presented numerous irregular ulcers. The margins of the ulcers were ragged, undermined, and overhanging. Their floor was covered by a necrotic yellow membrane. The longitudinal axis of the ulcers tended to coincide with the long axis of the bowel. Much of the mucosa of the bowel was involved, and in some places coalescence of the ulcers had left small islands and bridges of hyperplastic mucosa isolated between them. Distal to the splenic flexure the ulcers were much fewer in number. A few small areas of superficial ulceration were scattered throughout the remainder of the bowel, including one on the anterior rectal wall. There were, in addition, a few spots of hyperemia and very early superficial necrosis of mucous membrane.

The ulcerative process, in general, extended no deeper than the submucosa, and there was a conspicuous paucity of signs of acute inflammation. There were zones of necrosis and rather extensive lymphocytic and plasma cell infiltration, but almost no acute suppuration. A very diligent search by several examiners failed to reveal any trophozoites of *Endamoeba histolytica*. The character of the lesions could be adequately explained on the basis of the amebic colitis. The destructive process was primarily necrosis and lysis of intestinal mucous membrane. There was a noticeable disparity between the degree of tissue damage and the degree of inflammatory response. There was practically no scarring, which tends to explain the absence of roentgenologic signs.

*Other Findings:* There was acute fibrinous peritonitis which was localized to the lower part of the peritoneal cavity and appeared to be subsiding. The pelves of the kidneys were moderately dilated and renal calculi were found in the right one. There was some recent necrosis of renal parenchyma and evidence of many less re-

cent episodes of ischemic necrosis. The arterioles showed considerable hyperplastic change in the intima, and in some places there was occlusion and the hyperplastic intima was hyalinized.

The liver was large, heavy (weight, 2,210 gr.), and fatty. Scarcely an intact liver cell could be found in the sections examined. A recently drained abscess was present in the left labium majus, and a single mucosal ulcer was found on the posterior vaginal wall. The lungs were congested and edematous.

*Necropsy Diagnosis:*

1. Ulcerations of ileum and colon, extensive (chronic idiopathic ulcerative colitis).
2. Postoperative closure of perforation of ileum and ileostomy.
3. Peritonitis, acute, fibrinous, subsiding.
4. Nephrolithiasis, right.
5. Hydronephrosis, bilateral, moderate.
6. Nephrosclerosis, moderately severe, bilateral.
7. Fatty metamorphosis of liver, extensive.
8. Abscess, left labium majus, surgically drained.
9. Ulcer, posterior vaginal wall.
10. Atherosclerosis, generalized, moderately severe.
11. Pulmonary congestion and edema.
12. Congestion of abdominal viscera.

## AMERICAN CONGRESS OF PHYSICAL MEDICINE

The American Congress of Physical Medicine will hold its twenty-fourth annual scientific and clinical session September 4, 5, 6 and 7, inclusive, at the Hotel Pennsylvania in New York. Scientific and clinical sessions will be given each day. All sessions will be open to members of the medical profession in good standing with the American Medical Association. In addition to the scientific sessions, the annual instruction courses will be held September 4, 5, and 6. These courses will be open to physicians and to therapists registered with the American Registry of Physical Therapy Technicians.

For information concerning the convention and the instruction course, address the American Congress of Physical Medicine, 30 North Michigan Avenue, Chicago 2, Illinois.

## NATIONAL SOCIETY FOR THE PREVENTION OF BLINDNESS TO HOLD CONFERENCE

The National Society for the Prevention of Blindness recently announced that it will hold a three-day conference Nov. 25, 26, and 27, 1946, at the Hotel Pennsylvania, New York City. The program will be of interest to all who are directly or indirectly concerned with eye health and safety. Details of the meeting will be available upon request at a later date.

# STATE DEPARTMENT OF HEALTH

*Walter L. Diering*

## PERTUSSIS IN IOWA

### *Morbidity and Mortality*

Data pertaining to reported morbidity and mortality from whooping cough in Iowa for the 11-year period 1935-1945 are presented in the following table:

TABLE I  
WHOOPIING COUGH IN IOWA 1935-1945

Year	Reported Cases	Recorded Deaths	Ratio Cases to Deaths
1935	841	44	19 to 1
1936	785	38	21 to 1
1937	1,698	90	19 to 1
1938	1,284	73	18 to 1
1939	951	47	20 to 1
1940	1,153	26	44 to 1
1941	1,737	38	46 to 1
1942	1,195	31	39 to 1
1943	1,702	40	43 to 1
1944	504	28	18 to 1
1945	275	13	21 to 1
1946	467 (1st 6 mos.)		

### *Reporting of Whooping Cough Is Inadequate*

Official reporting of whooping cough to local, district and state departments of health in Iowa is incomplete and below the rate for the country as a whole. As seen in the column to the extreme right in the above table, the ratio of cases to deaths in Iowa has varied during past years from a low of 18 to 1 to a high of 46 to 1. In the nation as a whole, the ratio of reported cases to recorded deaths in 1942 was 75 to 1.

During the first six months of 1946, reported cases of whooping cough totaled 467 compared with 94 cases for the same period in 1945.

## DEATHS FROM WHOOPING COUGH

During the past 11 years (1935-1945), deaths in Iowa due to whooping cough numbered 468, an average of 42 deaths a year. The following table (Table II) shows the number of deaths from this cause in Iowa according to age and sex, for the six year period 1940-1945.

TABLE II  
PERTUSSIS DEATHS IN IOWA 1940-1945

Age	Male	Female	No.	Total Male and Female Percent in Age Class
Under 1 year	67	63	130	73.9
1-2 years	12	21	33	18.8
3-4 years	1	2	3	1.7
5-9 years	2	3	5	2.8
10 and over	4	1	5	2.8
Totals	86	90	176	100.0

It will be noted that deaths from pertussis numbered 176 for the six year period 1940-1945, of which 130 fatalities (74 per cent), occurred among infants under one year and 163 or 93 per cent of such deaths, during the first two years of life.

## DEATHS UNDER ONE YEAR

Among 130 deaths in babies under one year of age for the period 1940-1945 (see Table II), 86 or 43 per cent occurred during the first five months and 105 or 59.6 per cent during the first eight months of life.

## MORBIDITY REPORT

Disease	June '46	May '46	June '45	Most Cases Reported From
Diphtheria	16	21	12	Polk, Fremont, Marion
Scarlet Fever	68	267	94	Polk, Woodbury, Cerro Gordo
Typhoid Fever	0	6	0	.....
Smallpox	1	4	2	Adair
Measles	644	1520	206	Boone, Black Hawk, Clinton
Whooping Cough	152	139	2	Cedar, Dubuque, Johnson
Brucellosis	95	16	8	Cerro Gordo, Wapello, Monona
Chickenpox	138	268	89	Dubuque, Black Hawk, Woodbury
German Measles	0	7	2	.....
Influenza	0	0	0	.....
Malaria	19	31	57	Polk, Scott, Marion
Meningitis	6	7	9	Allamakee, Black Hawk, Boone
Mumps	143	217	258	Des Moines, Dubuque, Clinton
Pneumonia	6	14	*514	Boone, Greene, Polk
Poliomyelitis	8	8	2	Polk, Jasper, Marshall
Tuberculosis	53	89	80	For the State
Gonorrhea	181	187	217	For the State
Syphilis	139	126	114	For the State

\*508 of the 514 cases are delayed reports from Iowa Hospitals covering 1st 26 weeks of 1945.



TABLE I  
REPORT OF SERUM-PLASMA CENTER FOR LAST HALF OF 1945 AND FIRST HALF 1946  
NORMAL SERUM, PLASMA, RH SERUM AND TUBERCULIN

TYPE OF SERUM	NO. CLINICS	NO. DONORS	AMOUNT BLOOD	AMOUNT SERUM	AMOUNT DISTRIBUTED	SERUM AND PLASMA ON HAND	COST OF DONORS
2nd HALF '45.....	22	619	152,710 cc	69,912 cc	99,720 cc	1,500 cc	None
NORMAL							
1st HALF '46.....	4	136	33,200 cc	15,145 cc	12,950 cc	3,695 cc	None
2nd HALF '45.....	17	453	113,500 cc	56,875 cc	110,250 cc	6,750 cc	None
PLASMA							
1st HALF '46.....					6,750 cc		
DRIED PLASMA	American Red Cross Surplus Plasma		5,292 x 500 cc units distributed		240 x 500 cc units on hand		
2nd HALF '45.....	3	3	750 cc	420 cc	Sent to Michael Reese Research Foundation		\$ 30 00
RH SERUM							
1st HALF '46.....	7	7	2,000 cc	1,045 cc	Sent to Michael Reese Research Foundation		80.00
TOTAL.....	53	1,218	302,160 cc	143,397 cc	229,670 cc	11,945 cc	\$110.00
TUBERCULIN .....		Monthly Mailing 1st 2,791 cc		Daily Orders 1,420 cc		Total 4,211 cc	
RECEIPTS FOR 1st SIX MONTHS \$4,340.42.							

TABLE II  
REPORT OF SERUM-PLASMA CENTER FOR LAST HALF OF 1945 AND FIRST HALF 1946 (continued)  
CONVALESCENT AND HYPER-IMMUNE SERUM

TYPE OF SERUM	NO. CLINICS	NO. DONORS	AMOUNT BLOOD	AMOUNT SERUM	AMOUNT DISTRIBUTED	SERUM AND PLASMA ON HAND	COST OF DONORS
2nd HALF '45.....	5	16	4,000 cc	1,795 cc	655 cc	8,125 cc	\$ 85.00
MEASLES							
1st HALF '46.....	6	18	4,500 cc	2,095 cc	6,085 cc	3,455 cc	90.00
MEASLES GLOBULIN.....	Distributed first six months 1946				9,856 cc		
2nd HALF '45.....	15	60	15,875 cc	7,890 cc	5,990 cc	7,730 cc	320.00
SCARLET FEVER							
1st HALF '46.....	27	96	19,400 cc	11,915 cc	11,350 cc	7,290 cc	525.00
2nd HALF '45.....	7	19	5,000 cc	2,525 cc	3,450 cc	2,920 cc	116.00
WHOOPIING COUGH							
1st HALF '46.....	None	None	None	None	2,920 cc	None	None
2nd HALF '45.....	None	None	None	None	None	None	None
HYPER-IMMUNE PERTUSSIS							
1st HALF '46.....	5	69	20,070 cc	9,835 cc	5,650 cc	3,645 cc	540.00
TOTAL.....	65	278	68,845 cc	36,055 cc	45,956 cc	33,165 cc	\$1,676.00
TOTAL CARRIED FORWARD							
FROM TABLE I.....	53	1,218	302,160 cc	143,397 cc	229,670 cc	11,945 cc	110.00
GRAND TOTAL FOR YEAR.....	118	1,496	371,005 cc	179,452 cc	275,626 cc	45,110 cc	\$1,786.00

THE SERUM-PLASMA CENTER, DIVISION OF PREVENTABLE DISEASES, IOWA STATE DEPARTMENT OF HEALTH

EXPLANATION OF TABLES

The above tables present information with reference to the various types of human serum and plasma as distributed from the Serum-Plasma Center of the Iowa State Department of Health.

Statewide Program

The statewide program of arranging and carrying out blood donor meetings in cooperation with many of the hospitals and local sponsoring groups was discontinued soon after announcement was made in December, 1945, that surplus dried plasma would be furnished through the American Red Cross for distribution through state health agencies. The Serum-Plasma Center and members of the Mobile Unit will be prepared later on to resume the work of assisting hospitals with maintenance of blood plasma banks and with collection of blood from donors.

Serum to test for the Rh factor

The Serum-Plasma Center has available for distribution on request of physicians and Iowa hospitals a limited amount of anti-Rh testing serum. This serum is supplied in cooperation with the Michael Reese Research Foundation, Chicago.

Hyperimmune pertussis serum

As will be noted in one of the accompanying tables, the Serum-Plasma Center began the distribution of hyperimmune pertussis serum in (February) 1946 to replace pooled convalescent serum previously furnished for the prevention and control of whooping cough. Pools of this serum as supplied thus far in 1946 were made possible by contributions of blood from a group of students at Drake University who received a series of nine preventive treatments with pertussis antigen for development of hyper-immune serum.

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## IMPRESSIONS OF THE SAN FRANCISCO MEETING

The American Medical Association meeting held in San Francisco July 1 to 5 attracted over fifteen thousand persons which was, according to newspaper reports, the largest attendance ever recorded. Hotel reservations were sold out early in May, making it necessary that visitors be quartered in near-by towns and even in barracks at Alameda. Complicating the picture was a street-car strike which began June 30 and continued through July 3. With doctors scattered throughout the city and with the exhibits and many of the meetings at the Civic Center, walking was the order of the day. On July 2, however, buses were chartered to take persons from the St. Francis Hotel to the Civic Center, thus relieving the situation. To compensate for the transportation difficulties, the weather was beautiful the entire period.

The House of Delegates meeting, which was held at the St. Francis Hotel, was very well attended. Extra chairs had to be provided for the numbers who came to hear the business sessions. (A full report of this meeting will be found elsewhere in this issue.)

The Civic Auditorium, which was used for the scientific and technical exhibits, is a building well arranged for such a purpose. The exhibits were excellent and well worth several visits.

To those who may have felt in the past that changes came slowly in the American Medical Association, the report of the transactions of the

House of Delegates will be interesting and encouraging. The Board of Trustees recommended that the Association publicize the accomplishments of scientific medicine, both through the pages of the JOURNAL and *Hygeia*; that the Bureau of Medical Economics be expanded and that a person of high caliber be hired to take charge of the expansion and work of the Bureau; and that the general manager be authorized to secure an administrative assistant to co-ordinate all departments of the Association in relation to the general public. This last named man would be in charge of a Division of Public relations under the direct supervision of the general manager and through his position of co-ordinator give a broad interpretation of the Association's activities. The Council on Medical Service and Public Relations was held to be vital in the work of the Association, and the suggestion was made that it wage an intensive program of professional relations.

Predominant throughout the meeting was the feeling that medical service plans must be expanded and implemented by the profession and that lethargy concerning their progress would be a grave mistake.

All in all, it was a forward-looking meeting. The war brought many advances in medical science which may now be utilized for the good of the general public. The health of the people should benefit greatly from these advances. Linked with that was the expressed determination to modernize the economics of medical practice and bring it within the reach of everyone.

## HAY FEVER IN IOWA

It is interesting to note in a ragweed pollen index for the United States and Canada, recently distributed by the Abbott Laboratories, that the figure quoted for Des Moines leads the group of all cities studied. The index figure given was one hundred and forty. By way of contrast, only those communities with an index figure below ten may be recommended as suitable for relief for ragweed victims. The index is considered reliable as it has been compiled through aerobiologic studies for the past twenty years in two hundred communities. These studies were made by numerous allergists and botanists and augmented by statistics supplied by the United States Weather Bureau. The index figure for each community is based on three factors concerned with pollen exposure and pollen symptoms: length of season, maximum concentration of pollen in the air, and total seasonal fall of pollen. The pollen index for Ames is eighty-seven and for Iowa City eighty-



three. No other figures for Iowa were quoted.

Physicians may be called upon to recommend areas for ragweed pollen sufferers as the hay fever season approaches in Iowa. Naturally it should be pointed out that preseasonal pollen treatment will protect many of these victims who either must remain at home or desire to be as comfortable as possible when undertaking necessary travel during the later summer and fall. Only Puget Sound and Western Oregon regions are completely free from ragweed and all related pollens. In advising areas for relief, preference should be given to wooded or seashore locations or mountain resorts.

#### STANDARD PENICILLIN TREATMENT FOR SYPHILIS

The committee on Medical Research of the Office of Scientific Research and Development has issued a joint statement with the United States Public Health Service and the Food and Drug Administration with suggestions regarding the use of penicillin in the treatment of syphilis. This statement revealed certain chemical information withheld during the war and provided information that at least four fractions designated in the United States as G, X, F, and K, are present in variable proportions in all brands of commercial penicillin. These variables are the result of the utilization of various strains and of techniques used in growth and purification of the end product. With increased purity of the end product, the proportion of penicillin K, which is rapidly destroyed by the body, also increased. As a result, patients treated with penicillin in which the K fraction predominated received less efficacious treatment of their syphilis. Accordingly, suggestions for adequate treatment include the following:

1. Intramuscular injection should be given every two to three hours continuously day and night for at least seven and one-half days.
2. A minimum total dosage should be 3,600,000 units for primary syphilis; 5,400,000 for secondary syphilis; and 10,000,000 units in certain late manifestations of the disease.
3. Fever therapy should be combined with penicillin in the treatment of neurosyphilis.
4. Injections of mapharsen, arsenic, or bismuth should be used in addition to penicillin in cases of relapse.
5. The use of sodium penicillin in aqueous solution should be used in a hospital procedure rather than an office type of treatment. However, the use of calcium penicillin in beeswax and peanut

oil in a dosage of 600,000 units had proved satisfactory where delayed absorption of the drug over a 24-hour period is desired. The use of this product in a minimum dosage of 6,000,000 units has been approved.

6. Under no circumstances should penicillin be administered orally for the treatment of syphilis.

#### STATE FAIR BABY HEALTH CONTEST

The veracity of Charles Dickens' statement that "Every baby born into the world is a finer one than the last"\* will be put to the test this month when several hundred babies participate in the state fair health contest. With an ever increasing number of applications for entrance blanks pouring in, the State Fair Board expects the first postwar contest to necessitate the hoisting of several tons of babyhood by the judging physicians during the contest week August 23 through August 29. To be signalized this year are the babies of service personnel while climaxing the affair will be the awarding of prizes at 10 a. m. Friday, August 30.

The contests, as they are now sponsored, were begun in 1912, since which time several thousand babies have participated. In 1911, a similar event was held under the auspices of the Iowa Congress of Mothers. An unusual feature of this year's program will be the television broadcasting of certain portions of the contest, arrangements for which are being made through the cooperation of radio station KRNT and the International Harvester Company.

Objectives of the baby health conference as set up by the contest committee are:

1. To reduce infant and maternal mortality.
2. To improve babies and the human race through them.
3. To stimulate public interest in child welfare.
4. To give practical help in caring for babies.
5. To establish closer relations between parents and doctors in the field of preventive medicine.
6. To give parents scientific information on child training and nurture from birth to school age.
7. To induce better health in all Iowa babies.

The State Fair Board has made arrangements to insure more healthful conditions not only for babies but for everyone through the more liberal use of DDT. This chemical will be used inside fair buildings, around livestock barns, and sprayed over the whole fairground area.

Educational exhibits will be placed throughout the rooms utilized for the baby contest. These,

\*Dickens, *The Life and Adventures of Nicholas Nickleby*, Vol. II, Charles Scribner's Sons, New York, 1910, Chap. xxvi. p. 52.

plus the opportunity to observe their children's health check-ups, should aid in the health education of parents and in the development of better public relationships for physicians.

#### REPORT OF THE MEETING OF THE HOUSE OF DELEGATES OF THE AMERICAN MEDICAL ASSOCIATION

The House of Delegates of the American Medical Association held its 1946 meeting at the Hotel St. Francis in San Francisco. It was called to order by the Speaker, Dr. R. W. Fouts, with one hundred and fifty-four delegates present. Dr. Anton J. Carlson was recipient of the Distinguished Service Award for 1946.

Dr. Fouts, in his address, stressed the importance of the reference committees and the work accomplished through them in each annual session. Dr. Lee, president, called attention to certain fundamental changes in the practice of medicine. He said regimentation was all right and necessary during the war, but its continued existence raises a specter of doubt now. The intent in much of the legislation being proposed is probably benevolent, but it is dangerous. Vigilance and caution are necessary.

Dr. Shoulders, president-elect, said that for all practical purposes we are still at war, and it is a time when encroachment is easy. He called for a sound medical program for veterans and also for people in general, saying the welfare of the public was the first concern of the medical profession.

Reports of officers and councils\* bore evidence of the many problems arising during the course of a year. The supplemental report of the Board of Trustees told of the work being done to combat the anti-vivisectionists, and mentioned the articles in *Colliers* and the *Reader's Digest* on the value of animal experimentation. It also told of plans being made to celebrate the one hundredth anniversary of the Association at the Atlantic City session in 1947.

The Council on Medical Education and Hospitals reported that Dr. Ray Lyman Wilbur was completing twenty-five years of service with the Council, and a vote of appreciation was given to him by the House. It also announced that Dr. Victor Johnson, who has been serving as secretary of the Council, has resigned to become associated with the Mayo Clinic. It was suggested that he might be retained as a member of the Council to the advantage of the Association.

A great deal of new business was introduced

and referred to reference committees. A midyear session of the House of Delegates was authorized by a change in the by-laws, and it was recommended that, when possible, reference committees be appointed two weeks in advance of the meeting and the members notified of their appointment so that they may familiarize themselves with the work to which they will be assigned. It was also recommended that, whenever possible, resolutions from state societies be sent to the American Medical Association thirty days prior to the annual meeting for publication in the *JOURNAL*.

A reapportionment of delegates was made. One delegate was assigned to the new section on the General Practice of Medicine, and the basis of apportionment was made one delegate for every thousand members or fraction thereof. Iowa's number of delegates remains the same under this rule.

It was suggested that the ancillary meetings held at the time of the annual meeting are interesting to the persons attending the American Medical Association meeting, and that their programs might well be published in the *JOURNAL*.

It was also voted that the Association should ask for priorities for veterans in the purchase of necessary articles such as automobiles.

The health fund to be set up by the United Mine Workers occasioned several different resolutions. The House agreed that the matter was of great importance and referred it to the Council on Medical Service for prompt consideration. It was felt the medical profession should proffer its aid and cooperation in the organization of the health plan of the UMW.

Great emphasis was placed on the need for immediate and comprehensive expansion of medical service plans to make coverage nationwide. The trustees were asked to appropriate money to help in this expansion, and the decision was that the trustees would grant funds upon the basis of need, each request being considered individually.

The Postwar Planning Committee was continued for another year.

All states were urged to take immediate steps to take care of veterans through a contract with the Veterans Administration. This subject brought forth many resolutions, all to the effect that the veteran should receive the best possible medical care.

General Kirk and Admiral McIntyre both addressed the House during the Tuesday session.

At the executive session on Tuesday afternoon, the board of trustees gave a summary of a report on reorganization of the American Medical Asso-

\*J.A.M.A., June 1, 1946, pp. 405-441.



ciation made by Raymond Rich and associates. The Rich report made definite recommendations which are as follows:

It recommended that the Association publicize the accomplishments of scientific medicine. This should be done through the pages of the JOURNAL and through *Hygeia*. *Hygeia* should be expanded and vitalized, and the editor of the JOURNAL, Dr. Fishbein, should be entrusted with this work.

It stated that specialists in medical science cannot be masters of economic and social factors, and recommended that the Bureau of Medical Economics be expanded and that a person of high caliber be hired for this work.

Third, it recommended that the general manager be authorized to secure an administrative assistant to co-ordinate all departments in relation to the general public. This would constitute a Division of Public Relations, providing for a greatly broadened interpretation of Association activities to the public. It would at all times be under the supervision of the general manager and the board of trustees.

The work of the Council on Medical Service and Public Relations was held to be vital to the Association. In fact, the Council has grown so greatly that it has been delegated responsibilities identical with those of the Association as a whole. The report recommended that the Council be made the Council on Medical Service, dropping the words "Public Relations," since the Division of Public Relations should handle that work. The Council on Medical Service should conduct an intensive program of professional relations and the report listed many ways in which it could expand its usefulness.

The recommendations of the Rich report were accepted by the House, and the necessary changes in the by-laws were made.

Election of officers was held Thursday afternoon. Dr. Olin West was made president-elect; Dr. E. L. Bortz of Philadelphia, vice president; Dr. George F. Lull and Dr. Josiah J. Moore re-elected secretary and treasurer respectively. Dr. Fouts was re-elected speaker with Dr. Borzell vice speaker, and Dr. C. W. Roberts re-named trustee. Dr. Walter F. Donaldson of Pennsylvania was re-elected to the Judicial Council; Dr. L. W. Larson of North Dakota was elected to the Council on Scientific Assembly; Dr. Victor Johnson was named to the Council on Medical Education and Hospitals, and Dr. E. J. McCormick of Ohio and Dr. T. A. McGoldrick of New York to the Council on Medical Service.

New York was chosen as the meeting place for 1949 provided satisfactory arrangements can be

made for space. The Atlantic City session will be held June 9 to 13, 1947, and the St. Louis session May 7 to 11, 1948.

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#### AMERICAN BOOK CENTER APPEALS FOR MEDICAL AND SCIENTIFIC BOOKS AND PERIODICALS

The American Book Center for War Devastated Libraries, Inc., which has come into being to meet the need of supplying books to students and scientists in war ravaged areas, recently made an appeal for medical and scientific books and periodicals to be used for rebuilding libraries.

Books needed are those of scholarly nature published in the last decade in the fields of general science and technology, medicine and the allied sciences, dentistry, chemistry, physics, biography, the social sciences, the fine arts, and fiction of distinction. Especially desired are scholarly scientific books published during the last decade, though not necessarily of the latest edition. Periodicals in any of the above subjects including runs of volumes, single volumes, or even single issues are being sought.

Large quantities of national journals are needed, such as Science, Society of Experimental Biology and Medicine, Journal of the American Medical Association, American Journal of Surgery, New England Journal of Medicine, New York State Medical Journal, Southern Medical Journal, Journal of the Association of American Medical Colleges, American Journal of Public Health, the United States Public Health Reports Weekly, and Surgery, Gynecology, and Obstetrics as well as journals in the special sciences and clinical specialties. If in doubt, the sender may forward a list of titles available directly to headquarters before shipping, giving a rough idea of dates and volumes, and officials there will notify the person if the material offered meets requirements.

All shipments should be sent prepaid via the cheapest means of transportation to the American Book Center, c/o The Library of Congress, Washington 25, D. C. Reimbursement of transportation expenses will be made upon notification of the amount due.

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#### SPEAKERS BUREAU RADIO SCHEDULE

WOI—Wednesdays at 2:45 p. m.

WSUI—Wednesdays at 3:00 p. m.

- |           |                                 |                             |
|-----------|---------------------------------|-----------------------------|
| August 7  | Care of Teeth                   | Russell M. Pederson, D.D.S. |
| August 14 | Preparing Your Child for School | Walker B. Henderson, M.D.   |
| August 21 | High and Low Blood Pressure     | Hyman M. Hurevitz, M.D.     |
| August 28 | All Cripples Don't Wear Braces  | Jerald Greenblatt, M.D.     |

# Roster of Iowa Physicians in Military Service

As of July 18, 1946

## Appanoose County

Condon, F. J., Centerville (Owensboro, Ky.)...Major, U.S.P.H.S.

## Benton County

Senfeld, Sidney, Belle Plaine

## Black Hawk County

Marquis, F. M., Waterloo (Ft. Sam Houston, Tex.)...Capt., A.U.S.

## Boone County

Brewster, E. S., Boone (APO 254, New York, N. Y.)...Major, A.U.S.

## Buena Vista County

Witte, H. J., Marathon (APO 350, New York, N. Y.)...Major, A.U.S.

## Butler County

James, R. A., Allison (Mare Island, Cal.)

## Carroll County

Freedland, Maurice, Coon Rapids  
Scannell, R. C., Carroll (Denver, Colo.)...Capt., A.U.S.

## Cass County

Schiff, Joseph, Anita (Walla Walla, Wash.)...Capt., A.U.S.

## Cerro Gordo County

Fitzpatrick, M. R., Mason City (Ft. Dix, N. J.)...1st Lt., A.U.S.  
Harris, R. H., Mason City (Cando, N. Dak.)...Major, A.U.S.  
†Harrison, G. E., Mason City...Col., A.U.S.  
Mullen, L. M., Mason City (Kansas City, Mo.)...Capt., A.U.S.  
Tice, G. I., Mason City (Mare Island, Cal.)...Lt., U.S.N.R.  
Tice, W. A., Mason City (Jacksonville, Fla.)...Lt. (jg), U.S.N.R.

## Cherokee County

George, L. A., Cherokee...A.U.S.

## Clayton County

Glesne, O. G., Monona (Knoxville, Iowa)...Capt., A.U.S.

## Dallas-Guthrie Counties

Butterfield, E. T., Dallas Center (Springfield, Mo.)...Capt., A.U.S.  
Byrnes, A. W., Guthrie Center (Fort Custer, Mich.)...Major, A.U.S.

## Delaware County

Baumgarten, Oscar, Earlville...Capt., A.U.S.

## Des Moines County

Eigenfeld, M. L., Burlington (Cleveland, Ohio)...1st Lt., A.U.S.

## Dubuque County

Anderson, E. E., Dubuque (Bradley Field, Conn.)...Capt., A.U.S.  
Cunningham, J. C., Dubuque (Fairfield, Ohio)...Capt., A.U.S.  
Edstrom, Henry, Dubuque (Galesburg, Ill.)...Lt. Col., A.U.S.  
†Hall, C. B., Dubuque...Capt., A.U.S.  
Knoll, A. H., Dubuque (San Francisco, Cal.)...Major, A.U.S.  
Lavery, H. B., Dubuque (Washington, D. C.)...Lt. Col., A.U.S.  
Leik, D. W., Dubuque (Wichita Falls, Tex.)...Capt., A.U.S.  
Mueller, J. J., Dubuque...Capt., A.U.S.  
Painter, R. C., Dubuque (Cheyenne, Wyo.)...Lt. Comdr., U.S.N.R.

## Fayette County

Walsh, E. L., Hawkeye (Huntington, W. Va.)...A.U.S.  
Walsh, W. E., Hawkeye (Cleveland, Ohio)...Comdr., U.S.N.R.

## Floyd County

Huber, R. H., Charles City...1st Lt., A.U.S.  
Magdsick, Carl, Charles City (Green Cove Springs, Fla.)...Lt., U.S.N.R.

## Franklin County

Hedgecock, L. E., Hampton (Camp Lejeune, N. Car.)...Comdr., U.S.N.R.

## Greene County

Cartwright, F. P., Grand Junction (Colorado Springs, Colo.)...Capt., A.U.S.

## Hamilton County

Mooney, F. P., Jewell...Capt., A.U.S.  
Schrader, M. A., Webster City (Topeka, Kan.)...1st Lt., A.U.S.

## Henry County

Cogan, Samuel, Mt. Pleasant  
Dwankowski, Carl, Mt. Pleasant (Chicago, Ill.)...Major, A.U.S.  
Ristine, L. P., Mt. Pleasant (Denver, Colo.)...Major, A.U.S.

## Iowa County

Geiger, U. S., North English (Kansas City, Mo.)...Lt. Comdr., U.S.N.R.

## Jackson County

Skelley, P. B., Jr., Maquoketa (APO 247, San Francisco, Cal.)...1st Lt., A.U.S.

## Jefferson County

Frey, Harry, Fairfield (Norfolk, Va.)...Comdr., U.S.N.R.  
Graber, H. B., Fairfield...Lt. Col., A.U.S.  
Taylor, I. C., Fairfield (Washington, D. C.)...1st Lt., A.U.S.

## Johnson County

Albert, S. M., Iowa City...Capt., A.U.S.  
Cobb, E. A., Iowa City (Ft. Sam Houston, Texas)...1st Lt., A.U.S.  
Crowell, E. A., Iowa City (Ft. Geo. Wright, Wash.)...Capt., A.U.S.  
Evers, L. B., Iowa City...1st Lt., A.U.S.  
Flax, Ellis, Iowa City...1st Lt., A.U.S.  
Francis, N. L., Iowa City (Annapolis, Md.)...Lt. (jg), U.S.N.R.  
Harness, W. M., Iowa City (Hot Springs, Ark.)...A.U.S.  
Hartung, Walter, Iowa City (Springfield, Mo.)...Major, A.U.S.  
Hessin, A. L., Iowa City (APO 469, New York, N. Y.)...Major, A.U.S.  
Keislar, H. D., Iowa City (Washington, D. C.)...Capt., A.U.S.  
Laubscher, J. H., Iowa City (Ft. Benning, Ga.)...1st Lt., A.U.S.  
Moreland, F. B., Iowa City (Maxwell Field, Ala.)...1st Lt., A.U.S.  
Petersen, R. E., Iowa City (Manchester, N. H.)...1st Lt., A.U.S.  
Ringrose, E. J., Iowa City  
Sells, R. L., Jr., Iowa City (Palmdale, Cal.)...Capt., A.U.S.  
†Springer, E. W., Iowa City (APO 678, New York, N. Y.)...Capt., A.U.S.  
Stump, R. B., Iowa City (Denver, Colo.)...Capt., A.U.S.  
Titus, E. L., Iowa City (Los Angeles, Cal.)...Col., A.U.S.  
Trapasso, T. J., Iowa City (APO 520, New York, N. Y.)...Capt., A.U.S.  
Vander Laan, C. A., Iowa City...A.U.S.  
Voelker, C. A., Jr., Iowa City...Capt., A.U.S.  
Weatherly, H. E., Iowa City...Major, A.U.S.  
Weih, J. E., Iowa City...A.U.S.  
Wollmann, W. W., Iowa City (Martinsburg, W. Va.)...Capt., A.U.S.

## Junior Members

†Adams, M. P., Iowa City (Fleet PO, San Francisco, Cal.)...Lt. (jg), U.S.N.R.  
Ahrens, J. H., Iowa City (APO San Francisco, Cal.)...A.U.S.  
Ball, A. L., Iowa City (Camp Polk, La.)...Major, A.U.S.  
Barrent, M. E., Iowa City (Camp Tyson, Tenn.)...Capt., A.U.S.  
Blair, J. D., Iowa City (APO San Francisco, Cal.)...Major, A.U.S.  
Boyd, R. J., Iowa City (Spokane, Wash.)...Capt., A.U.S.  
Brintnall, E. S., Iowa City (APO New York, N. Y.)...Major, A.U.S.  
Burr, S. P., Iowa City (APO San Francisco, Cal.)...1st Lt., A.U.S.  
Couch, O. A., Iowa City (Camp Van Dorn, Miss.)...1st Lt., A.U.S.  
Freiberg, M., Iowa City (Jefferson Barracks, Mo.)...A.U.S.  
Hamilton, H. E., Iowa City (Chicago, Ill.)...1st Lt., A.U.S.  
Hendricks, A. B., Iowa City (Fleet PO, San Francisco, Cal.)...Lt. Comdr., U.S.N.R.  
Hovis, Wm., Iowa City (Fleet PO, San Francisco, Cal.)...Lt. (jg), U.S.N.R.  
Kaplan, Nathan, Iowa City (Carlisle Barracks, Pa.)...1st Lt., A.U.S.  
Keil, P. G., Iowa City (Sioux City, Iowa)...1st Lt., A.U.S.  
McCann, J. P., Iowa City (Carlisle Barracks, Penn.)...1st Lt., A.U.S.  
Moen, B. H., Iowa City (APO 755, New York, N. Y.)...Capt., A.U.S.  
Phillips, R. M., Iowa City (San Francisco, Cal.)...1st Lt., A.U.S.  
Randall, R. G., Iowa City (Waterloo, Iowa)...Capt., A.U.S.  
Rosenbusch, M., Iowa City (Fort Leonard Wood, Mo.)...1st Lt., A.U.S.  
Russell, L. A., Iowa City (Fort Blanding, Fla.)...Capt., A.U.S.  
Sawtelle, W. W., Iowa City...Lt., U.S.N.R.  
Shand, J. A., Iowa City (Carlisle Barracks, Penn.)...1st Lt., A.U.S.  
Shapiro, S. I., Iowa City  
Skewis, J. E., Iowa City (Corona, Cal.)...Lt. Comdr., U.S.N.R.  
Watters, V. G., Iowa City (Fort Leonard Wood, Mo.)...1st Lt., A.U.S.  
Wicks, W. J., Iowa City (Camp Crowder, Mo.)...Capt., A.U.S.  
Williams, L. A., Iowa City (Treasure Island, Cal.)...1st Lt., A.U.S.  
Yetter, W. L., Iowa City (APO New York, N. Y.)...Major, A.U.S.  
\*Zahrt, N. E., Iowa City (APO San Francisco, Cal.)...Capt., A.U.S.  
Zimmerman, H. A., Iowa City (Santa Ana, Cal.)...1st Lt., A.U.S.

## Keokuk County

Engelmann, A. T., What Cheer (Camp Polk, La.)...Capt., A.U.S.

## Kossuth County

Corbin, R. L., Luverne (Des Moines, Iowa)...Capt., A.U.S.

## Lee County

Younan, Thomas, Ft. Madison...Capt., A.U.S.

## Linn County

Coughlan, V. H., Coggon (Fort Snelling, Minn.)...A.U.S.  
Leedham, C. L., Springville (Hot Springs, Ark.)...Col., A.U.S.  
†MacDougall, R. F., Cedar Rapids (APO 9057, New York, N. Y.)...Capt., A.U.S.  
Noble, W. C., Cedar Rapids (Camp San Luis Obispo, Cal.)...1st Lt., A.U.S.  
Smrha, J. A., Cedar Rapids (Denver, Colo.)...Capt., A.U.S.  
Yavorsky, W. D., Cedar Rapids (Fleet PO, San Francisco, Cal.)...Comdr., U.S.N.R.



**Lyon County**

Moriarity, F. J., Rock Rapids (Corvallis, Ore.)....Capt., A.U.S.

**Mahaska County**Bos, H. C., Oskaloosa.....Major, A.U.S.  
Gillett, R. M., Oskaloosa (Fleet PO, San Francisco,  
Cal.).....Capt. U.S.N.**Marion County**

Gray, J. F., Jr., Melcher.....Capt., A.U.S.

**Mills County**

Kuitert, J. H., Glenwood (Denver, Colo.).....Major, A.U.S.

**Mitchell County**

Owen, W. E., Osage (San Diego, Cal.).....Lt., U.S.N.

**Monona County**†Harlan, M. E., Onawa (Fleet PO, San Francisco,  
Cal.).....Lt. (jg), U.S.N.R.**Monroe County**Bay, F. N., Albion.....Lt. Comdr., U.S.N.R.  
Gilliland, C. H., Albion (Fleet PO, San Francisco,  
Cal.).....Lt. Comdr., U.S.N.  
Morrissey, W. J., Lovilia (Tacoma, Wash.).....1st Lt., A.U.S.**Muscatine County**Kimball, J. E., Jr., West Liberty.....Major, A.U.S.  
Norem, Walter, Muscatine (APO, Miami, Fla.).....Capt., A.U.S.**Page County**Bauer, Frank, Shenandoah (APO New York, N. Y.)....A.U.S.  
Brush, Frederick, Shenandoah (APO New York, N. Y.)...A.U.S.  
Burdick, F. D., Shenandoah (Denver, Colo.).....Major, A.U.S.  
Schwiddie, Tilford, Shenandoah (APO New York, N. Y.)..A.U.S.**Polk County**Bender, H. R., Des Moines (Carlisle Barracks,  
Penn.).....1st Lt., A.U.S.  
Bruner, J. M., Des Moines.....Lt. Col., A.U.S.  
Ervin, L. J., Des Moines.....Lt. Col., A.U.S.  
Fleck, W. L., Des Moines (Ft. Howard, Md.).....Lt. Col., A.U.S.  
Fried, David, Des Moines (Carlisle Barracks,  
Penn.).....1st Lt., A.U.S.  
Frassas, John, Des Moines.....1st Lt., A.U.S.  
Gerchek, E. W., Des Moines.....U.S.P.H.S.  
Harris, H. L., Des Moines (Salina, Kan.).....Capt., A.U.S.  
La Tona, Salvatore, Des Moines.....1st Lt., A.U.S.  
Lederman, James, Des Moines.....1st Lt., R.C.A.  
Levin, S. L., Des Moines (Des Moines, Iowa).....Major, A.U.S.  
Maguire, L. M., Des Moines (Des Moines, Iowa)....Col., A.U.S.  
Maloney, P. J., Des Moines.....Capt., A.U.S.  
Martin, L. E., Des Moines (Helena, Ark.).....1st Lt., A.U.S.  
Mencher, E. W., Des Moines.....1st Lt., A.U.S.  
Montgomery, S. A., Des Moines (Carlisle Barracks,  
Pa.).....Capt., A.U.S.  
†Morden, R. P., Des Moines (APO 635, New York,  
N. Y.).....Capt., A.U.S.  
Mumma, C. S., Des Moines (Los Angeles, Cal.)....Major, A.U.S.  
Nourse, M. H., Des Moines (U.S.N. Hosp.,  
Corona, Calif.).....Lt. Comdr., U.S.N.  
Patton, B. W., Des Moines (Camp Robinson,  
Ark.).....1st Lt., A.U.S.  
Schlaser, V. L., Des Moines (Fleet PO, New  
York, N. Y.).....Lt. Comdr., U.S.N.  
Singer, P. L., Des Moines (Camp Grant, Ill.).....1st Lt., A.U.S.  
\*Snodgrass, R. W., Des Moines (APO 9528, New York,  
N. Y.).....Capt., A.U.S.  
Updegraff, Thomas, Des Moines (APO San Fran-  
cisco, Cal.).....Capt., A.U.S.  
Van Hale, L. A., Des Moines (Denver, Colo.).....Major, A.U.S.**Pottawattamie County**Kurth, C. J., Council Bluffs (Wichita, Kan.).....Major, A.U.S.  
Mathiasen, J. W., Council Bluffs (APO 239,  
San Francisco, Cal.).....Capt., A.U.S.  
Wurl, O. A., Council Bluffs (New Orleans, La.)..Lt. Col., A.U.S.**Scott County**†Baker, R. W., Davenport (APO 511, New York,  
N. Y.).....Capt., A.U.S.  
Boyer, U. S., Davenport (Rock Island, Ill.).....Lt. Col., A.U.S.  
Carey, E. T., Davenport.....1st Lt., A.U.S.  
Coleman, Tom, Davenport (APO 230, New York,  
N. Y.).....Capt., A.U.S.  
Hurteau, Everett, Davenport (APO 647, New York,  
N. Y.).....Capt., A.U.S.  
Hurteau, W. W., Davenport (Camp Barkeley,  
Texas).....Major, A.U.S.  
Krauker, Max, Davenport.....Major, A.U.S.  
Perkins, R. M., Davenport (APO 121B, New York,  
N. Y.).....Capt., A.U.S.  
Rendleman, Hugh, Davenport (Fleet PO, San  
Francisco, Cal.).....Lt. (jg), U.S.N.R.  
Sheeler, I. H., Davenport (APO 350, New York,  
N. Y.).....Capt., A.U.S.**Sioux County**

Gleysteen, R. R., Alton (Palo Alto, Cal.).....Comdr., U.S.N.

**Wapello County**Brentan, Emanuel, Ottumwa (Camp Carson, Colo.)..Capt., A.U.S.  
Howell, H. P., Ottumwa (Oakland, Cal.).....Major, A.U.S.  
Struhle, G. C., Ottumwa (Cleveland, Ohio).....Lt. Col., A.U.S.**Washington County**Boice, C. L., Washington (Oakland, Cal.)....Lt. Comdr., U.S.N.  
Droz, A. K., Washington (Long Beach, Cal.)...Comdr., U.S.N.R.  
Stuvsman, R. E., Washington (Patuxent River,  
Md.).....Lt., U.S.N.R.**Webster County**†Thatcher, O. D., Fort Dodge (APO 634, New York,  
N. Y.).....Capt., A.U.S.**Woodbury County**Cowan, J. A., Sioux City (Lansing, Mich.)....Major, U.S.P.H.S.  
Crowder, R. E., Sioux City (Kansas City,  
Mo.).....Lt. Comdr., U.S.N.R.  
Knott, P. D., Sioux City.....Capt., A.U.S.  
Simonsen, Marie N., Sioux City (Philadelphia, Pa.)..Lt., U.S.N.R.**Wright County**

Doles, E. A., Clarion (Spokane, Wash.).....Capt., A.U.S.

(\*) Reported missing in action.  
(†) Reported deceased in service.  
(‡) Reported prisoner of war.**INTERNATIONAL COLLEGE OF SURGEONS TO MEET IN DETROIT**

The International College of Surgeons, United States Chapter, will hold its Eleventh Annual Assembly and Convocation in Detroit, Oct. 21, 22 and 23, 1946.

Surgical clinics in Detroit hospitals will feature the first morning of the Assembly. Thereafter all the meetings, the Convocation, and the Exhibition will be held in the Masonic Temple. The Detroit Statler and the Book-Cadillac will be hotel headquarters.

Among the principal speakers to be heard will be Mr. Hamilton Bailey of London, England; Dr. Francisco Granã of Peru; Dr. Felipe F. Carranza of Argentina; Dr. Manuel Manzanilla of Mexico; and Dr. Wayne W. Babcock of Philadelphia.

Officers of the International College of Surgeons, United States Chapter, include President Herbert Acuff, M.D., of Knoxville, Tennessee; President-Elect Custis Lee Hall, M.D., of Washington, D. C.; and Louis J. Gariepy, M.D., of Detroit, Executive Secretary. Dr. Gariepy, General Chairman of Arrangements for the Detroit Assembly, advises that satisfactory housing accommodations for the 1946 Assembly have been assured through the Detroit Convention & Tourist Bureau. Copy of Program and detailed information may be obtained by writing Dr. Gariepy at 16401 Grand River Avenue, Detroit 27, Mich.

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# WOMAN'S AUXILIARY NEWS

MRS. KEITH M. CHAPLER, *Chairman of Press and Publicity Committee*, Dexter, Iowa

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*President-Elect*—MRS. FRED MOORE, Des Moines

*Secretary*—MRS. CHARLES A. NICHOLL, Panora

*Treasurer*—MRS. HENRY G. DECKER, Des Moines

## ANNUAL REPORT OF PROGRAM COMMITTEE

The program committee realized that auxiliaries were still carrying on under the war emergency, which meant that individual members were contributing largely to the various war activities. In that situation, fewer programs were still being planned.

The program, as outlined by the program committee of the national organization, was presented in the Woman's Auxiliary News. From these suggestions, a wide variety of themes could be chosen, depending upon the special interest of the group.

This has been augmented from time to time by more specific material from the legislative and public relations committee which pointed up subjects important in those areas. We are very grateful for the careful work which went into the preparation of their material. It was most useful.

Now that life is slipping back into a more normal pattern, we would like to recommend that, while we are gathered in convention, the whole group make its decision on program emphases for next year. This would give direction to the program committee who would foster programs bearing on those emphases. This could also result in concerted effort to accomplish definite objectives. With this in mind, the program of the state meeting will include the presentation of two important undertakings which could legitimately challenge our cooperation. Others might be considered, but the committee does recommend that we determine a more definite program through which the auxiliary in the state could make a fine contribution and find satisfaction in working.

Mrs. Fred Moore, Chairman

## BUENA VISTA COUNTY AUXILIARY

The Buena Vista County Auxiliary has a one hundred per cent paid membership of fourteen. Three meetings have been held since last April, the first being a tea at the home of the president, Mrs. Max A. Armstrong of Newell, who gave a report of the state meeting. The second was a luncheon with Mrs. J. H. O'Donoghue of Storm Lake acting as hostess for the program, "New Medical Discoveries." The third was a dinner with the Buena Vista County Medical Society at the Bradford, Storm Lake, at which meeting the old officers were re-elected as follows: Mrs. Max A. Armstrong of Newell, president; Mrs. W. W. Morrison of Alta, secretary-treasurer.

The Auxiliary participated in the *Hygeia* contest, with Mrs. Paul W. Brecher of Storm Lake acting as chairman. The main project is to assist in the furnishing of the new county hospital when it is completed.

One member, Mrs. Bridge of Alta, was killed in an automobile accident in December.

## BUTLER COUNTY AUXILIARY

The Butler County Society wishes to report that its members, first of all, are proud and grateful to be members of the Woman's Auxiliary to the Iowa State Medical Society.

This group has eleven active members out of a possible twelve. The meetings are held regularly on the second Monday of each month. Since the Butler County Medical Society meets at the same time, the doctors and their wives have dinner together as a group and hold their separate meetings after the meal.

Subjects discussed during the year were "Postwar Planning," "Rehabilitation and Reconditioning of American Soldiers," "Physical Fitness and Mental Hygiene," "Tropical Diseases in the Postwar Era," and "Penicillin and the Sulfa Drugs." Two book reports were given, namely *Ambassadors in White* and *Burma Surgeon*. At the November meeting they had motion pictures on tuberculosis.

Since this is the first year of our existence as a society, donations were rather small because of a somewhat similar condition in the treasury. However, one dollar was donated to the Tuberculosis Fund and one dollar to the Cancer Fund. At the Christmas party, members donated enough to buy a bushel of apples for the Children's Home at Waverly, Iowa.

During the year members were active in war work such as packing overseas boxes for our soldiers, cleaning and sewing wool pieces to make lap robes for service men in hospitals, and helping with paper and clothing drives. One member spent a day at a canteen serving several hundred service men. Several helped their husbands in the offices during the war.

The county is credited with fifteen *Hygeia* subscriptions for this year. The group hopes to do much better next year.

Mrs. Fred Rolfs, Aplington, President



### ANNUAL REPORT OF THE DALLAS-GUTHRIE MEDICAL AUXILIARY 1945

The Woman's Auxiliary to the Dallas-Guthrie Medical Society held four regular meetings in 1945. A picnic, for social purposes only, was held at Spring Park in July with ten families attending. The membership for the year was twenty-two. Several members who were officers or state chairmen attended the state business sessions.

Projects consisted of subscription promotion for *Hygeia* and *The Bulletin*. Mrs. A. G. Felter, *Hygeia* chairman, secured fifty subscriptions which classified the Dallas-Guthrie Auxiliary in the national contest under "Counties that reached or went over their quotas and had at least 25 subscription credits." This was the only Auxiliary in the state which registered in the national contest.

The Dallas-Guthrie Auxiliary subscribes annually to *The Bulletin* for its president. Mrs. E. T. Warren, *Bulletin* chairman, secured ten subscriptions.

A more recent project under the leadership of the retired president was the collection of thirty dollars from Auxiliary members for the Cancer Control Fund.

The programs consisted of papers and discussions on medical topics covered in current magazines. One program was on "Penicillin" and medical superstitions. Another was a highly informative talk on "Medicine in India" by Miss Florence Masters, a Methodist missionary who is business manager of ETCM Hospital Kolar, Mysore State, India. The January program was a review of Perry Burgess' book about a leper, *Who Walk Alone*.

Mrs. K. M. Chapler, Dexter, President

### DUBUQUE COUNTY AUXILIARY

On March 12 the Woman's Auxiliary to the Dubuque County Medical Society held its spring meeting, a luncheon at Mrs. Heller's. Hyacinths and matching candles decorated the table at which were seated twenty-one members. Following the luncheon, the members adjourned to the drawing room at Clarke College.

The business meeting opened with the pledge of the Auxiliary to the American Medical Association led by the president, Mrs. W. A. Henneger. This year we sent in twenty subscriptions to *Hygeia*.

The following officers were elected: Mrs. W. A. Henneger, president; Mrs. J. C. Pickard, vice president; Mrs. Clarence Darrow, secretary and treasurer; Mrs. Walter Cary, historian.

A program of readings and piano selections by Clarke College students concluded the meeting.

On May 14 the members of the Auxiliary entertained their husbands at a delightful dinner at Bunker Hill. There were sixty-two members and guests present. Following the dinner Mrs. Henneger called on several doctors who gave informal talks. The committee in charge was Mrs. A. J. Entringer, Mrs. Donovan Ward and Mrs. Thomas Moffatt.

Mrs. Clarence Darrow, Dubuque

### GREENE COUNTY AUXILIARY

The Greene County Auxiliary has not been active during the war, but the members have kept their organization and paid their dues.

Most of the members have been leaders in Red Cross and some have assisted in the county hospital during the extreme shortage of nurses. The past year we have lost two senior members, Mrs. F. M. Dean of Jefferson, who was an active member in former years, and Mrs. Shipley of Rippey.

We have gained several new members this year, now having twenty out of a possible twenty-one members.

Mrs. R. E. Parry, Scranton, President  
Mrs. M. H. Brinker, Jefferson, Secretary-Treasurer

### POLK COUNTY AUXILIARY

Membership in the Polk County Auxiliary for the year totaled one hundred and five. Four meetings were held at Younkers' Tea Room with an average attendance of forty-three.

The first meeting was held March 23 with Mrs. James W. Young, vice president, presiding. Dr. W. W. Bauer, Director of the Bureau of Health Education of the American Medical Association, was the speaker. He was introduced by Dr. Robert L. Parker, medical adviser of the Auxiliary. His subject was "Our Nation's Health Is Good."

The May and October meetings were bridge luncheons with war stamps given as prizes. At the October meeting the state president, Mrs. S. S. Westly, was the honored guest.

The January meeting consisted of the election of officers and the presentation of annual reports. Following the meeting, bridge was played.

The *Hygeia* committee, of which Mrs. Robert L. Parker was chairman, placed *Hygeia* subscriptions in forty-three Des Moines Public Schools. The schools subscribed for twenty-two magazines, and one commission paid for the remaining twenty-one. The Auxiliary gave subscriptions to the following community agencies: Roadside Settlement, South Side Community House, Salvation Army Center, Jewish Community Center, Y.W.C.A., Y.M.C.A., and the U.S.O. Mrs. Parker gave subscriptions to the Blue Triangle Branch of the Y.W.C.A. and to the Crocker Street Branch of the Y.M.C.A. Mrs. Sternagel, a member of the committee, gave two subscriptions to the West Des Moines Public Schools.

The war service committee under the leadership of Mrs. James A. Downing, continued the sewing service of previous years, and groups met at Broadlawns, Mercy, and Lutheran Hospitals throughout the year. The need was not so urgent as during the war years, but nevertheless, real service was rendered.

Noteworthy work was accomplished by Mrs. Charles Ryan, chairman of U.S.O. activities, and her volunteer committee. A total of \$40.74 was contributed by the members of the Auxiliary to this work.

In addition to the work of the various committees, many hours of volunteer service were given to the Bond Drives and the Red Cross activities such as sewing, knitting, the making of surgical dressings, canteen work, home nursing, nurses' aids, and Gray Ladies.

Mrs. Russell C. Doolittle, President

#### WOODBURY COUNTY AUXILIARY

The Sioux Med-Dames of Woodbury County opened their year by helping to raise over two thousand dollars for the Cancer Fund.

The group was happy to give a Christmas party for the husbands, and since many doctors had returned from service, veterans were welcomed and honored at that time. Following an exchange of gifts with the help of Santa Claus, speeches were given by the returned doctors.

The Sioux Valley Association was held for the first time since the war in January. A luncheon was given for the out-of-town women, and a banquet was held in the evening.

Modest donations were given to the Nurses' Loan Fund and to the Red Cross Fund.

Carrie Sibley, Sioux City

#### APOLOGY

Mrs. J. A. Downing of Des Moines wrote the lovely "In Memoriam" program which was given at the state convention. Through spacing of material in the July issue of the Woman's Auxiliary News, her name was omitted. We apologize.

#### FACTS CONCERNING HYGIEA

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—Hygiea Handbook, 1945-46.

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# HISTORY OF MEDICINE IN IOWA

*Edited by the Historical Committee*

DR. WALTER L. BIERRING, Des Moines, *Chairman*

DR. HENRY G. LANGWORTHY, Dubuque, *Secretary*

DR. CHARLES L. JONES, Gilmore City

DR. CLYDE A. HENRY, Farson

DR. LESTER C. KERN, Waverly

## Medical History of Dickinson County

FERDINAND J. SMITH, M.D., Milford

### PART I

To the beautiful prairie lands, the bodies of timber, and to Spirit Lake, the largest lake in the State, and Lake Okoboji lying to the south, might be attributed Dickinson County's attraction to early settlers in 1856, for these same lakes have been a haven for summer visitors ever since.

#### SPIRIT LAKE MASSACRE

The life story of the first physician of Dickinson County, Dr. Isaac Harriot, was terminated by the Spirit Lake Massacre. This historical event, which snuffed out the candle of the first follower of Esculapius in these parts, seems a fitting introduction to the medical history of Dickinson County.

As the Rev. Landor Taylor, presiding elder of the Sioux City District of the Methodist Church at the time of the Smithland, Cherokee, and Spirit Lake Massacres, stated in "The Battlefield Reviewed" written in 1881, "The cause of the Lake Okoboji Massacre was due to too much whiskey in a few men at Smithland town."

The Rev. C. N. McMillan, living in Britt, Iowa, who had a copy of that book, says that it described the massacre as follows: "The Indians had camped near Smithland for the purpose of fishing and hunting. Occasionally a few would pass through the town. At this time three or four Indians collected together in a small store located there. They carried with them a few ears of corn which they had picked up—not in the fields, but by the wayside.

"A few of the whites, or rather roughs, asked them where they had obtained the corn to which the Indians frankly replied. No more was said, but the whites went into a thicket, cut hickory clubs for each one of themselves, then returned to the store and fell upon the Indians and chased them into their camps.

"Most of the male Indians were absent on a hunt; the whites gathered up all of the guns that were there, having made the few remaining Indians promise that on the following day they would go down and shake hands with a band of the Omaha Indians, another tribe which the Indians knew would be certain death for them.

"When the Indian hunters returned and found out what had been done, they started that night for Cherokee, and commenced their depredations. Some forty or fifty of the whites were killed and several of the Indians. When I tell you that liquor was the moving cause, my readers will not need any further explanation."

The Rev. Mr. McMillan said that he had read several incorrect statements as to the origin of the massacre, but that, so far as he knew, this was the only source of true history.

If those roughs had behaved themselves, the Indians would have retired, and this sad affair would never have taken place. In the course of several days the Indians appeared at Lake Okoboji where they killed twenty people and captured four (three women and one child), later killing two of the women. Among those who were killed was Dr. Isaac Harriot, the first physician to locate in Dickinson County.

#### DR. ISAAC HARRIOT

Dr. Isaac Harriot was born Sept. 24, 1833, in Boundbrook, Somerset County, N. J. His parents moved to Illinois when he was five years old. In 1848 they removed to St. Louis, and in the following year to Pekin, Ill. It was here that young Isaac began his preparation for a medical career, studying under the tutelage of a Dr. Maw of that city. His next place of residence was at Atlanta, Ill., where he continued the study of medicine under Dr. Taney, a local physician,

and worked as a clerk in a drug store. From Atlanta, Ill., he proceeded to St. Paul and Red Wing, Minn., beginning his practice there.

In the summer of 1856 he came to Dickinson County with three other young men from Red Wing, Minn. They camped on the northeastern shore of West Okoboji near the present location of the Okoboji post office. Each of the party took a claim, and together they built a cabin on what is now known as Smith Point.

At the time Dr. Harriot came to Okoboji, the settlers around the lakes, numbering six families, were located from one-half to six miles apart, and a few trappers and unmarried homesteaders had settled on the lake shore, constituting a colony of forty persons: sixteen men, eight women, and sixteen children.

There are two accounts of Dr. Harriot's death. In one it is stated that his body was found near his cabin with his hand gripping in death his broken gun, which he must have used in his last defense. The other states that his body was found sitting in a snow drift near his dwelling, his gun lying a few feet away and his hand still holding a revolver from which one shot had been fired.

Dr. Harriot was buried, as were the other victims, near where he was killed. The following summer his body was taken up by his father and buried on Dixon's Beach. His remains, with all others of the massacre that could be found, lie on the east side of the monument in Arnolds Park, which commemorates the massacre.

#### DR. J. S. PRESCOTT

Dr. Prescott was the second physician to come to Dickinson County, but he never occupied himself with the practice of medicine. His native state was Ohio. He had college training and was educated by his parents to be a physician, but disliking the practice of medicine, he took up the practice of law, in which he engaged successfully for several years. Following his brief career as a lawyer, he joined the Methodist Church and became one of its pioneer preachers. He was one of the founders of Lawrence College at Appleton, Wis., and also attempted to found a similar institution at Point Bluff, Wis., in which he was only partially successful.

#### DR. JAMES BALL

Dr. James Ball was the third doctor who came to Dickinson County and the first to come especially with a view to the practice of medicine. He came from Newton, Iowa, to Spirit Lake in the spring of 1858. He is spoken of as a highly educated man.

He remained here until 1861, when, on the outbreak of the Civil War, he went into army service as a surgeon. He was first stationed at Sioux City, and from there he was transferred to some of the up-river posts on the Mississippi River. He built the first frame house in Spirit Lake in the spring of 1859, which was also the first frame house built in Iowa north of Sioux City and west of the east fork of the Des Moines River.

#### DR. McDUFF

After Dr. Ball left Spirit Lake, the County was without a physician until Dr. McDuff came in 1864. He was the fourth physician in Dickinson County, locating on a claim on the east side of East Okoboji Lake near Dr. Prescott's Tusculum Town site. He was not a graduate of a medical college, and gave very little attention to the practice of medicine after locating at Tusculum, devoting his time mostly to the development of his homestead.

#### DR. ELIJA O. BAXTER

Dr. Baxter came to Spirit Lake from Estherville, Iowa, to which he had come from Wisconsin where he had practiced medicine previously. In about 1878 he removed from Spirit Lake to Red Oak, Iowa. From there he went to Elliott, and lastly practiced in Dixon, Nebraska. He established an extensive practice in Spirit Lake, enduring all the hardships of a pioneer physician. He also took an active part in local politics and was a supporter of Horace Greeley.

Dr. Baxter was a native of Vermont. He died at the age of 72, at which time he was living with his son, E. B. Baxter, in Marseilles, Ill.

#### DR. WHITCOMB

Dr. Whitcomb arrived in Dickinson County during the summer of 1866 and made his headquarters with George Ring, whose residence was near the outlet of East Okoboji Lake. He was in the itinerant class, coming from Chicago to Iowa and stopping at various places for a brief period as he traveled about the state. He came from Fort Dodge to Okoboji, and with headquarters at the latter place, traveled through Iowa and Minnesota, posing as a specialist in treating chronic diseases. It is said that he cut quite a splurge as a physician during his sojourn at Okoboji and had worked out a plan for establishing a hospital at or near Ring's Outlet. His scheme, however, never materialized, owing to his inability to finance the enterprise. He soon moved to Mankato, Minn., where he remained for a brief period. From there he drifted westward, leaving no traces.



## DR. W. S. BEERS

Dr. W. S. Beers was the sixth physician in Dickinson County. He located on a claim at the southern end of Gar Lake June 1, 1866. He lived on his homestead six years, at the same time carrying on his practice. He then moved into Milford, bought some property, and engaged in business which he managed in connection with his practice. In 1874 he transferred his business interests to Spirit Lake where he established the first general merchandise drug store in Dickinson County. He continued to carry on his practice in Spirit Lake and vicinity until his death in January, 1877.

Dr. Beers was born in Onondago County, N. Y., January, 1832. He first practiced medicine in New Centerville, Wis. In 1865 he moved from Wisconsin to Riceville, Iowa, where he practiced medicine with a Dr. Rich for a year. While at Riceville he married Miss Eleanor Fletcher, and in the summer of 1876 they moved to their farm in Dickinson County. Dr. Beers died in January, 1877, at Spirit Lake. His wife is still living.

## DR. FOX

Dr. Fox came to Milford in about 1868 and practiced there for three years, being the first physician to locate in the new town of Milford. No further data concerning him are available.

## DR. J. E. GREEN

Dr. J. E. Green came to Milford in the spring of 1869. In June he came into possession of the drug business, which he greatly enlarged. He was graduated from the Medical Department of the State University of Iowa and moved to Spencer, Iowa, where he died of an internal hemorrhage.

## DR. ELIAS TUCKER

Dr. Tucker came to Spirit Lake in 1874. He was a native of Vermont and during the Civil War saw military service. He claimed to be an eclectic and is spoken of by those who knew him as the "herb doctor." There is no record that he had a diploma from a medical school or that he ever attended a medical college. He had practiced for many years before coming to Spirit Lake, six of them in Iowa.

## DR. H. C. CRARY

Dr. H. C. Crary located in Milford in the latter part of 1874 and practiced there six years before moving to Spencer. He succeeded J. W. Osburne as superintendent of public schools in Dickinson County. There is no further record of him.

## DR. ELIAS LAWRENCE BROWNELL

Dr. Brownell was born in Hamilton County, Ohio, in 1843. When he was 7 years old his parents moved to Vermont where he received his education preparatory to entering college. Instead of going to college he enlisted in the army in June, 1863, as a private in Company F, Ninth Vermont Infantry. He served three and a half years. In February, 1864, he received the commission of Second Lieutenant, serving in that capacity until April, 1865, when he was commissioned First Lieutenant. A few months later he was advanced to the rank of Captain.

Young Brownell, in the battle at Harper's Ferry, was captured with his regiment and paroled a few days afterward. He returned to active service in 1863, his regiment having been exchanged. The group's first duty was the guarding of several thousand Confederate prisoners who were being taken to City Point, Va., for exchange. He served with his regiment at Yorktown and Suffolk, Va., at New Port and New Berne, N. C., at the capture of Fort Harrison, and at the second battle of Fair Oaks. Brownell was among the first to enter Richmond, April 3, 1865. His regiment was on duty in that city until July, when they were sent to Norfolk, Va., where they remained until discharged in December, 1865.

The year following his discharge from the army young Brownell entered the medical department of the University of Vermont, graduating in June, 1868. He first located in St. Lawrence County, N. Y. In the spring of 1870 he came west, locating at Jackson, Minn., where he shared the honor of being "the only doctor within fifty miles" with a physician at Fairmont, Minn., and one at Estherville, Iowa. During these years his professional activities extended thirty or forty miles out from Jackson. He finally moved to Spirit Lake where he remained and practiced at both Spirit Lake and Jackson. He established the first permanent drug store in Spirit Lake in the fall of 1878, which he continued until ill health forced him to retire. At the time of his retirement Dr. Brownell had practiced longer in Dickinson County than any other physician.

During the seven years he practiced medicine in Jackson County, he was county superintendent of schools. For many years Dr. Brownell was examining surgeon for the United States Pension Bureau, receiving his appointment in 1871 after his removal to Spirit Lake. He was very successful in his work in both locations. He died in 1918.

(To be continued)

# THE JOURNAL BOOK SHELF

## BOOKS RECEIVED

**ANESTHESIA IN GENERAL PRACTICE**—By Stuart C. Cullen, M.D., Head of Division of Anesthesiology, Department of Surgery, State University of Iowa Hospitals, Associate Professor of Surgery (Anesthesiology), State University of Iowa College of Medicine. The Year Book Publishers, Inc., Chicago, 1946. Price, \$3.50.

**CORNELL CONFERENCES ON THERAPY**—Edited by Harry Gold, M.D., Managing Editor; David P. Barr, M.D., Eugene F. DuBois, M.D., McKeen Cattell, M.D., and Charles H. Wheeler, M.D. Volume I. The Macmillan Company, New York, 1946. Price, \$3.25.

**DISEASES OF THE RETINA**—By Herman Elwyn, M.D., Senior Assistant Surgeon, New York Eye and Ear Infirmary. The Blakiston Company, Philadelphia and Toronto, 1946. Price, \$10.

**ELECTROCARDIOGRAPHY IN PRACTICE**—By Ashton Graybiel, M.D., Capt., M. C., U.S.N.R. Co-ordinator of Research, U. S. Naval School of Aviation Medicine, Pensacola, Florida; and PAUL D. WHITE, M.D., Lecturer in Medicine, Harvard Medical School, Physician, Massachusetts General Hospital; with the assistance of LOUISE WHEELER, A.M., Executive Secretary, the Cardiac Laboratory, Massachusetts General Hospital; CONGER WILLIAMS, M.D., Assistant in Medicine, Harvard Medical School and Massachusetts General Hospital. Second edition. W. B. Saunders Company, Philadelphia, 1946. Price, \$7.00.

**PNEUMOPERITONEUM TREATMENT**—By Andrew Ladislaus Banyai, M.D., Associate Clinical Professor of Medicine, Marquette University Medical School, Milwaukee, Wis.; Member, Editorial Board, "Diseases of the Chest"; formerly Preceptor in Tuberculosis, School of Medicine, University of Wisconsin, Madison, Wis. The C. V. Mosby Company, St. Louis, 1946. Price, \$6.50.

**RENAL DISEASES**—By E. T. Bell, M.D., Professor of Pathology in the University of Minnesota, Minneapolis, Minnesota. Lea & Febiger, Philadelphia, 1946. Price, \$7.00.

**A TEXTBOOK OF GYNECOLOGY**—By Arthur Hale Curtis, M.D., Professor and Chairman of the Department of Obstetrics and Gynecology, Northwestern University Medical School; Chief of Gynecological Service, Passavant Memorial Hospital, Chicago. Fifth edition. W. B. Saunders Company, Philadelphia, 1946. Price, \$8.00.

**WOMEN IN INDUSTRY**—Their Health and Efficiency: Issued under the auspices of the Division of Medical Sciences and the Division of Engineering and Industrial Research of the National Research Council. Prepared in the Army Industrial Hygiene Laboratory by Anna M. Baetjer, Sc.D., Assistant Professor of Physiological Hygiene, School of Hygiene and Public Health. The Johns Hopkins University. W. B. Saunders Company, Philadelphia and London, 1946. Price, \$4.00.

## BOOK REVIEWS

### A MALARIOLOGIST IN MANY LANDS

By Marshall A. Barber; with a foreword by Colonel Paul F. Russell, M.C., A.U.S. University of Kansas Press, Lawrence, Kans., 1946. Price, \$2.50.

This little volume of memoirs makes no pretension of being either a scientific or a literary classic. It is the highly personalized account of a keen and kindly observer's experiences in fighting malaria in the far places of the world over some three decades. The Americas, the Philippines, Malaya, the Mediterranean countries, Africa, Russia, and India are all on the reader's itinerary as he follows Dr. Barber's experiences.

The author, former member of the department of bacteriology at the University of Kansas, has had a colorful career in public health work. During the war he was consultant in tropical medicine to the Secretary of War and was awarded a citation as "one of the most noted malariologists in the world." His reminiscences will be enjoyed by both lay and professional readers.

H. J. S.

### HOWELL'S TEXTBOOK OF PHYSIOLOGY

Edited by John F. Fulton, M.D., Sterling Professor of Physiology, Yale University School of Medicine. Fifteenth edition. W. B. Saunders Company, Philadelphia, 1946. Price, \$8.

On the shelves in my medical library is Howell's Text-book of Physiology, sixth edition, published in 1915, which I acquired my first year in medical school thirty-one years ago. It is interesting to compare this volume with the present edition under

review—the fifteenth. New knowledge accumulated during this period is indeed impressive.

The task of revising Howell's Physiology has fallen on the shoulders of Dr. John F. Fulton, Professor of Physiology at Yale University. Dr. Fulton has enlisted the aid of many other eminent physiologists who have contributed chapters in their special fields to the book. It is out of the question to attempt to review the text material in this 1,250-page volume. One can say only that it contains the most modern viewpoints upon a great variety of subjects important to clinical medicine. While physiology is one of the fundamental basic sciences of the medical school curriculum, nevertheless, the practitioner also in these days finds much need to keep abreast of advances in this field. Howell's physiology has stood the test of time as one of the outstanding texts in this important subject.

L. F. H.

### ELECTROCARDIOGRAPHY

Including an Atlas of Electrocardiograms

By Louis N. Katz, M.D., Director of Cardiovascular Research, Michael Reese Hospital, Chicago; Professorial Lecturer in Physiology, University of Chicago. Second edition, thoroughly revised. Lea & Febiger, Philadelphia, 1946. Price, \$12.

Expansion of the original work by approximately 50 per cent marks this second edition of one of the most popular standard texts on electrocardiography.

Broadening of previously accepted standards for normal electrocardiograms has been made necessary as the result of extensive experience with young adults in the armed services. More than a thousand



illustrative tracings are included in this volume. Although the electrocardiograph originally found its chief use in studying the cardiac arrhythmias, emphasis is now properly placed on its even greater clinical value in coronary disease. A new chapter on axis shift and heart strain does much to clarify the confusion attending the question of electrical axis deviation. Tables summarizing the abnormal findings in various pathologic conditions are a valuable new feature of this edition.

The author is well known as a teacher of electrocardiography and a prolific contributor to the literature on cardiac physiology. The section in this volume on criteria for estimating myocardial involvement should be required reading for every physician who seeks help from an electrocardiographic tracing in evaluating a clinical problem.

H. J. S.

#### THE MODERN ATTACK ON TUBERCULOSIS

By Henry D. Chadwick, M.D., and Alton S. Pope, M.D. Revised edition. The Commonwealth Fund, New York, 1946. Price, \$1.00.

In less than 130 pages the authors summarize and provide some evaluation of the instruments available for the eradication of tuberculosis in the United States. They emphasize that tuberculosis is to be viewed as "one of the communicable diseases, in its total social and economic background," and must be approached as such.

Since "prevention has been a more potent factor than treatment in the reduction of tuberculosis . . . understanding of the epidemiology of the disease is essential to the planning of an effective control program."

This monograph provides an historic introduction, a chapter on epidemiology, another on diagnostic procedures, and one on the "sanatorium as a means of control and treatment." The message, however, is contained in the final discussions of case finding in the community and a "community campaign of eradication." The authors present data on the results of mass radiography and the effectiveness of examination of contacts and other special groups in the detection of early cases of tuberculosis.

It is to be regretted that a broader interpretation of tuberculin testing has not been made. Once again the roentgenogram is stressed. The tuberculin test, even among children, can be effective in determining the geographic areas where mass radiography can be productive. This is particularly true in those states with a low tuberculosis mortality and a relatively low incidence of infection.

The volume will have a limited appeal to those groups dealing with tuberculosis case finding.

L. J. G.

#### MODERN MANAGEMENT IN CLINICAL MEDICINE

By F. Kenneth Albrecht, M.D., S.A. Surgeon U. S. Public Health Service, Kansas State Tuberculosis Consultant, Formerly Clinical Director, U. S. Marine Hospital, Baltimore, Md. The Williams & Wilkins Company, Baltimore, 1946. Price, \$10.

Many doctors have brief notes on their own favorite treatment regimes. These serve as subsidiary "brains." This new book falls into a similar category. It contains a surprising amount of pertinent facts about the symptoms, physical findings, and management of common diseases. The treatment regimes and the data here given are sensible and accurate.

The book suffers, as all encyclopedias do, from want of detail on any given subject, so that, as the author says, it is "intended for the doctor's office, not his library." It is cheapened somewhat by the inclusion of illustrations from certain drug houses. In general, however, the book is well written and should serve as an aid to the busy practitioner who wants a few facts about a certain disease in a hurry.

D. A. G.

#### SYNOPSIS OF PATHOLOGY

By W. A. D. Anderson, M.D., Professor of Pathology and Bacteriology, Marquette University School of Medicine; Pathologist, St. Joseph's Hospital, Milwaukee, Wisconsin; formerly Associate Professor of Pathology, St. Louis University School of Medicine. The C. V. Mosby Company, St. Louis, 1946. Price, \$6.50.

Usually a synopsis of a subject as comprehensive as pathology can do little more than list the various topics that should be covered, but this one covers the entire field with a thoroughness and ease that is remarkable. The fact that this synopsis now has a second edition should, in itself, recommend it. The chapters on virology, rickettsial, spirochetal, mitotic, protozoal, and helminthic disease have been revised and enlarged to fit the emphasis on "tropical medicine." The illustrations and color plates are of a quality to, in themselves, recommend this book. The bibliography at the end of each chapter is essentially that of the recent reviews of the various subjects which will greatly aid the reader who desires more detailed information.

This synopsis is highly recommended to medical students who are beginning the study of pathology and to the clinician who needs a concise, accurate, clear, ready reference to one of the fundamental sciences.

E. A. F.

## SOCIETY PROCEEDINGS

### Butler County

A meeting of the Butler County Medical Society was held in Clarksville July 8. Dinner was served the group at Herb and Ann's Inn after which those attending were guests in the home of Dr. and Mrs. E. M. Mark. A paper, prepared and read by J. G. Evans, M.D., of New Hartford, was included on the program at the men's meeting. Mrs. C. F. Roder of Dumont had charge of the session of the Woman's Auxiliary.

### Dallas-Guthrie Society

The regular meeting of the Dallas-Guthrie County Medical Society and Woman's Auxiliary was held at McDonald's Tea Room in Perry July 18. Following the dinner, Daniel A. Glomset, M.D., of Des Moines, spoke on "Hepatitis," and Herman J. Smith, M.D., also of Des Moines, spoke on "Rheumatic Fever in Adults."

S. J. Brown, M.D., Secretary

### Jackson County

John C. Dennison, M.D., of Bellevue, who has practiced medicine there for fifty-two years, was honored on his eightieth birthday anniversary by the Jackson County Medical Society July 10. A 12:30 o'clock dinner was served at the Riverside Inn, following which E. V. Andrew, M.D., of Maquoketa, presided at an after dinner program. The dentists of Bellevue were guests of the group.

### Lee County

The Lee County Medical Society held a meeting, outing, and dinner at the Keokuk Country Club the afternoon and evening of June 26. The program was presented by two faculty members of the Northwestern University College of Medicine, Ray McNealy, M.D., who discussed "Carcinoma of the Large Bowel," and Gilbert Marquartz, M.D., who spoke on "Vascular Diseases." Both talks were illustrated with slides. A business meeting followed the dinner.

### Sac County

A dinner meeting at Hotel Park in Sac City was held by the Sac County Medical Society June 13. C. D. Gibson, M.D., who had charge of the program, showed moving pictures which dealt with crush injuries.

### Tama County

The Tama County Medical Society held its regular monthly dinner meeting at the Sunnyside Cafe on June 20. Dr. A. J. Wentzien of Tama is president of the organization.

### PERSONAL MENTION

The JOURNAL is pleased to announce the release of the following physicians from active military duty:

**Dr. Marvin W. Burleson** was released from the Army Medical Corps on May 23 after serving forty-three months. Dr. Burleson, who held the rank of Major at the time of his separation, reopened his office in Fort Dodge July 1. He plans to limit his practice to general surgery.

**Dr. R. A. Huber**, who recently received his discharge from the Army Medical Corps in which he held the rank of Captain, has established offices in Charter Oak, the former location of his father, the late Dr. S. A. Huber.

**Dr. Melvin R. Kelberg** was released from active service with the Navy Medical Corps on February 19 with the rank of Lieutenant Commander. He has announced the opening of offices in the Frances Building in Sioux City with practice limited to obstetrics and gynecology. Prior to his entering the navy in August, 1942, Dr. Kelberg was Assistant Obstetrician and Gynecologist at the University Hospitals, Iowa City.

**Dr. Augustus B. Kuhl, Jr.**, has returned to Davenport after serving twenty-eight months in the Army Medical Corps. He resumed his practice with his father, Dr. Augustus B. Kuhl, who has offices in the First National Bank Building, in July. Dr. Kuhl held the rank of Major at the time of his discharge.

**Dr. Donald G. Mackie**, formerly of Charles City, was discharged from the Army Medical Corps in which he held the rank of Captain on June 11. He has opened an office for general practice in Grants Pass, Oregon.

**Dr. Henning W. Mathiasen** has announced his return from military service and the opening of his office in the Bennett Building, Council Bluffs, for the practice of medicine, surgery, and diagnostic x-ray. Dr. Mathiasen, who was in service five years, has also reopened his office in Neola, which, along with the Council Bluffs office, will be operated by him and his two brothers, Dr. John W. and Dr. Emmett B., upon their return from military service.

**Dr. Carl D. Oelrich**, formerly of Sioux Center, recently received his discharge from the Army Medical Corps at Buckley Field, Denver, Colo. Dr. and Mrs. Oelrich are at present taking an extended trip through the southwest and along the west coast. He held the rank of Captain at the time of his release.



**Dr. Edward J. C. Panzer**, who practiced at Stanton, Iowa, before entering the navy, has received his California license and is now practicing in Bell Gardens, California. He held the rank of Lieutenant at the time of his release.

**Dr. Erwin C. Sage** was released from active duty with the Navy Medical Corps in June and has returned to Burlington where he is connected with the county health unit.

The following physician, who was previously reported released from active military duty, has announced the establishment of his offices in the following location:

**Dr. Fred L. Blair, Jr.**, of Fonda, will return to his practice with his father, Dr. Fred L. Blair, with whom he was associated prior to his entrance into military service. Dr. Blair was a Lieutenant in the Navy Medical Corps at the time of his release.

**Dr. Fred H. Beaumont** completed a postgraduate course in surgery at New York Medical College, New York City, in June, and has returned to his practice at the clinic in Council Bluffs. Prior to entrance on his postgraduate work last October, Dr. Beaumont spent some twenty-seven months as Senior American Medical Officer in German prison camps after his capture at Faid Pass.

**Dr. Frank E. Boyd** of Colfax and **Dr. Frank E. Quire** of Lynnvile are completing fifty-three years of medical practice in their respective communities and are celebrating their seventy-eighth birthdays this year.

**Dr. Ralph DeCicco**, recently discharged from the Army Medical Corps, has purchased the practice of Dr. E. O. Reynolds in Greenfield. Dr. DeCicco practiced one year at Runnells and eight years in Des Moines before entering military service in 1941. He held the rank of Major at the time of his discharge. Dr. Reynolds, who announced his retirement some time ago, plans to move to California later in the summer.

**Dr. John W. Dulin**, professor of general surgery on the faculty of the State University of Iowa College of Medicine, resigned July 1. Dr. Dulin, who has held that position since 1933, stated that his plans for the future are incomplete.

**Dr. Francis C. Dunn**, formerly of Chicago, has now moved to Cedar Rapids.

**Dr. Floyd W. Ernst** of New Albin is leaving that location at the end of July to become associated with St. Mary's hospital in Iowa City where he will continue his general surgery while doing further study at the University. He has practiced in New Albin and vicinity for eleven years.

**Dr. Robert C. Fenstermacher**, who has just com-

pleted twenty-eight months' service with the Navy Medical Corps, has announced his intention to practice medicine in Stanton. Prior to his entrance into military service, he was graduated from the University of Nebraska College of Medicine and served his internship at Omaha Methodist Hospital.

**Dr. Theodore J. Greteman**, who has been associated with the Birmingham General Hospital, Van Nuys, Calif., the past few months, is now located in Dubuque. He was formerly of the University Hospitals and Charles City.

**Dr. James S. Gaumer** of Fairfield has been compelled, because of failing eye sight, to close his office and retire. He has practiced continuously for forty-six years, forty-two of which have been in his present location.

**Dr. Walter E. Gower**, who has practiced in Pocahontas for eleven years, opened offices in the Physicians' Clinic, Fort Dodge, for the general practice of medicine on July 25.

**Dr. James M. Grove**, formerly of Libertyville, Ill., has joined the staff at the state hospital in Cherokee as eye, ear, nose, and throat specialist.

**Dr. Jerhard Hartman**, formerly superintendent of a hospital in Newton-Wellsey, Mass., has assumed the position of superintendent of the University Hospitals at Iowa City. Dr. Harold F. Smith, assistant superintendent, has been acting as superintendent since November.

**Dr. Harold Henstorf** has announced that he will be associated with Dr. Robert A. Powell in the practice of medicine and surgery in Farragut and Shenandoah. Dr. Henstorf went into the army upon the completion of his medical work at the University of Iowa College of Medicine, and upon his return from overseas duty he was assigned to the Veterans' Hospital at Fort Logan, Colo. He received his discharge in May. Dr. Powell, who received his release from the navy in the spring, has practiced in Farragut about ten years.

**Dr. Hugo Lindholm** took over the practice of Dr. George H. West in Armstrong July 1. Dr. Lindholm, formerly of Iowa City, worked with Dr. James P. Clark of Estherville a short time before entering the service.

**Dr. George F. McBurney** of Belmond is completing fifty years of practice this year. He came to Belmond in May, 1896, after completion of his medical education at the State University of Iowa.

**Dr. James W. Martin**, who has been working with Dr. James H. Wise of Cherokee since his return from service, has announced his intention to re-establish his permanent office in Holstein.

**Dr. Robert P. Mason** of Wilton, a former navy Lieutenant, has accepted the position of resident physician at the Iowa Methodist Hospital in Des Moines.

**Dr. John H. Matheson** of Des Moines who reopened his office in the Equitable Building in July, specializes in diseases of the eye rather than eye, ear, nose, and throat as was announced in the July issue. The JOURNAL apologizes for this error.

**Dr. Guy E. Montgomery**, formerly of Keota, opened offices in Washington in June. Prior to his discharge in February, 1946, he was a Major in the Army Medical Corps.

**Dr. George E. Morrissey**, who was engaged in postgraduate work at Pennsylvania Hospital, Philadelphia, before joining the armed forces in 1941, has opened an office in the Union Bank Building, Davenport. Since his separation from the Army Medical Corps with the rank of Captain last December, Dr. Morrissey has been studying at the State University Hospital and at Cook County Hospital, Chicago.

**Dr. Wesley M. Page** joined the staff of the McVay Memorial Hospital in Lake City on July 1, at which time he had just completed a three-month internship at the University Hospital.

**Dr. Glenn S. Rost**, who established an office in Halstead, Kan., following his release from military service, is now located in Lake City where he has purchased a half interest in the McCrary Hospital.

**Dr. John Russell**, who recently moved to Yuma, Ariz., is now located in Long Beach, Calif.

**Dr. Thomas E. Shea** opened his offices for the general practice of medicine in Storm Lake July 1. Since his discharge from the Army Medical Corps with the rank of Major, he has been practicing with Dr. Wilbur C. Thatcher in Fort Dodge.

**Dr. George C. Spellman** of Iowa City is now associated with the Madigan General Hospital in Tacoma, Wash.

**Dr. Ray E. Trussel**, epidemiologist and associate in the department of hygiene and preventive medicine at the State University, has received a Rockefeller fellowship for a year's study at John Hopkins University in Baltimore.

**Dr. Thomas G. Walker**, who recently completed a three-month postgraduate course in surgical diagnosis and eye work at the University of Minnesota, is now practicing with his father, Dr. Thomas S. Walker, in Riceville. This makes the third generation of Walkers who have practiced in that location, Dr. Walker's grandfather, the late Dr. Hugh Thomas Walker, having come to Riceville in 1889.

**Dr. Marshall Paul Wees**, a former Lieutenant in the Navy Medical Corps, has announced that he will practice in Newton with offices in the Engle Building. He will specialize in obstetrics and women's diseases. Dr. Wees served his internship at Ann Arbor and St. Mary's Hospital in Saginaw, Mich., prior to his entering service.

**Dr. George H. West** of Armstrong has retired after forty-one years of practice in that community. He and his family moved to Chicago in July.

### MARRIAGES

Miss Elizabeth Slee, daughter of the late Mr. and Mrs. Edmund Slee, of Hampton, and Dr. Frank L. Siberts of Hampton were married June 27 at the home of the Rev. D. M. Beggs, pastor of the Congregational Church in Hampton. After a short trip to Minnesota, the couple returned to Hampton where they will make their home.

Miss Ellen Miles, daughter of Mr. and Mrs. Herbert A. Miles of Alexandria, Va., became the bride of Dr. Louis J. Noun of Des Moines on June 28 in Chicago. Dr. Noun was recently discharged from the navy in which he served as Lieutenant Commander for three and one-half years. He has resumed his practice in Des Moines where they are at home in the Hotel Fort Des Moines.

### DEATH NOTICES

**McCrary, Warren Encell**, of Lake City, aged fifty-three, died June 25 of a heart attack at the McCrary Hospital in that city. He was graduated from the Northwestern University Medical School, Chicago, in 1917. At the time of his death he was a member of the Calhoun County and the Iowa State Medical Societies.

**Parsons, Irving Usher**, of Omaha, Neb., formerly of Malvern, aged seventy-nine, died June 23 following a stroke suffered at the home of his son, George, in Omaha. He was graduated from the Bellevue Hospital Medical College, New York, in 1893, and at the time of his death was a life member of the Mills County and Iowa State Medical Societies.

**Thompson, Gilbert Nathan**, of Jesup, aged seventy-eight, died June 20 of coronary thrombosis at his home. He was graduated from the Keokuk Medical College, College of Physicians and Surgeons, in 1900. He was a member of the Buchanan County and Iowa State Medical Societies.

**Tyler, Charles Wesley**, of Polk City, aged seventy-seven, died July 6 at his home following an extended illness. He was graduated from the Drake University College of Medicine, Des Moines, in 1893. He was a life member of the Polk County and the Iowa State Medical Societies at the time of his death.



# The JOURNAL

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### INFECTIOUS (VIRAL) HEPATITIS\*

WILLIAM S. MIDDLETON, M.D., Madison, Wis.

Infectious hepatitis is not a newcomer in medicine. Under such designations as catarrhal jaundice and catarrhal cholangitis this condition has been a familiar and recurring problem for many generations. Unquestionably the medical profession in this country was brought to a sudden awareness of its gravity by the startling incidence of jaundice among soldiers receiving certain lots of yellow fever vaccine. In the first six months of 1942 the Surgeon General of the United States Army<sup>1</sup> reported 28,585 instances of postvaccinal jaundice and sixty-two deaths from this cause. From this harrowing experience arose not only a knowledge of its pathogenesis but also an impetus to the study of related hepatic disorders. Infectious hepatitis had a wider distribution in the Army than any other infectious disorder except the venereal diseases. Indeed it was a problem in every theater of operation. Its pandemicity alone arrests attention, but its common occurrence in civilian practice requires an assessment of the present knowledge of infectious hepatitis.

From a number of sources the fact emerges that certain other hepatitic disorders are related to, if not identical with, the naturally occurring infectious hepatitis. Postvaccinal (yellow fever) jaundice has been traced to the human serum used as a diluent for the vaccine. The donors of this serum had lately recovered from so-called catarrhal cholangitis or gastroduodenitis. Further instances of homologous serum jaundice accidentally developed in attempts to produce passive immunity against measles and mumps in the British Army.<sup>2</sup> Of one hundred and nine recipients of measles convalescent serum, thirty-seven developed jaundice and eight died in sixty-one to ninety-three days. Among two hundred and sixty-six British soldiers receiving mumps convalescent serum,

eighty-six became icteric, but none died. The benignity of homologous serum jaundice derived from mumps convalescent subjects contrasts sharply with the gravity of the apparently related condition arising from measles convalescent serum. In spite of careful resurveys of the latter donors, hepatotoxic agents could not be recovered nor experimental lesions be reproduced from these sources. The further incrimination of homologous serum in this connection has been extended in the growing evidence of a causal relation between the administration of whole blood, plasma, or reconstituted dry serum and jaundice.<sup>3, 4, 5</sup> Apparently more removed was the postarsphenamine hepatitis, but in a certain number of instances this condition may also be so related. Faulty technic in the sterilization of the needles and syringes used in some clinics for the administration of the arsenicals to syphilitic subjects has been proved responsible for the transmission of the infective agent.<sup>6, 7</sup> Hence, the gaps among infectious hepatitis, homologous serum jaundice, and postarsphenamine hepatitis have been perceptibly narrowed.

With certain isolated exceptions<sup>8</sup> all efforts to transfer the hepatotoxic agent to laboratory animals have been fruitless. A number of workers have produced the characteristic clinical features in human volunteers by intramuscular and intravenous injections of the whole blood or plasma from patients suffering from infectious hepatitis.<sup>9, 10, 11, 12</sup> Furthermore, the nasal washings and feces of the affected have been found infective by feeding to volunteers.<sup>13, 14</sup> The noxious agent passes through a Seitz filter. A filtrable virus is postulated on the basis of these studies, but only a single report of its successful cultivation is recorded.<sup>15</sup> Whatever the order of this hepatotoxic agent may be (and its viral nature seems established beyond peradventure), it possesses unusual properties of resistance to natural forces. It can survive drying, freezing, and a temperature of 56 C. for one-half hour.<sup>16</sup>

\*From the University of Wisconsin Medical School.  
Presented before the Ninety-fifth Annual Session, Iowa State Medical Society, Des Moines, April 18 and 19, 1946.

Apparently some immunity exists among the adult population in areas of high epidemicity. Since only a minority of these individuals give a history of hepatitis, it may be assumed that the resistance of the remainder results from natural immunity or from immunity acquired in the course of subclinical (or anicteric) hepatitis. In this connection the absence of contact secondary instances of hepatitis from patients with homologous serum jaundice is a conspicuous difference from infectious hepatitis. Experiments upon human volunteers indicate that subjects recovering from homologous serum jaundice are immune to parenteral injections of the same agent, but they have no protection against viral hepatitis.<sup>17, 17a</sup> Naturally occurring viral hepatitis conveys at least some measure of temporary immunity, however. The lack of cross immunity may properly be cited as an objection to a unity of etiology.

Modern pathologic methods have materially discounted the old concept of a cholangitic explanation for this condition. Progress biopsy returns through the course of the disease indicate a profound hepatitis.<sup>18</sup> The histologic changes admit of separation into three forms, i. e., diffuse, zonal, and mixed. The degenerative changes are marked at the center of the lobules, and the cellular infiltration is more evident in the portal tracts. The disorganization of the hepatic lobules incident to the necrosis and autolysis of the hepatic parenchyma is extreme. The hepatic columns disappear and scattered clumps of cells remain. Except in the most seriously affected, however, the reticulum is spared. The cellular infiltration is composed of mononuclear cells, lymphocytes, and histiocytes in the main, which spread from the periphery into the lobule. Macrophages are more common in the lobule and a few neutrophils and eosinophils complete the picture. Jaundice results from hepatic cellular dysfunction or from disruption of biliary canaliculi. Significantly there is no histologic difference among naturally occurring viral hepatitis, homologous serum jaundice, and postarsphenamine hepatitis.

The recuperability of the liver is conspicuous among parenchymatous organs. In no pathologic state is it more evident than in viral hepatitis. Upon the scaffolding of the intact reticulum, the hepatic cells will regenerate to re-establish the normal columns within a period of five to six weeks so that a slight monocytic infiltration in the periportal spaces may remain the sole transitory residuum of the overwhelming pathologic lesions of the recent past.

Two further pathologic sequences of hepatitis must be considered. In rapidly fatal instances

of the disease the terminal picture is that of acute hepatic necrosis (fig. 1). No semblance of nor-

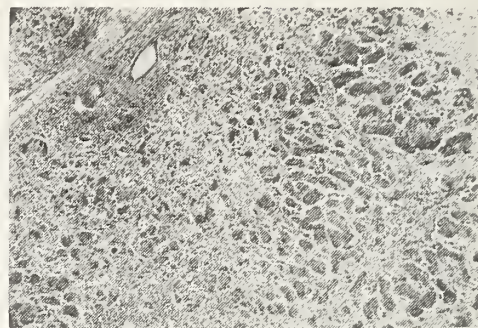


Fig. 1. Photomicrograph (x100) illustrating acute hepatic necrosis.

mal architecture remains. The necrosis and autolysis leave only a few hepatic parenchymal cells toward the periphery of the lobule. The periportal cellular infiltration has usually extended centrally to involve the entire lobule. In addition to these hepatic changes the kidneys, which ordinarily escape serious injury, may undergo cloudy swelling or actual necrosis, especially in the proximal convoluted tubules and the ascending loops of Henle. The spleen shows hyperplasia of the lymphocytes and reticulo-endothelium. Minute areas of necrosis are encountered in the splenic pulp. Nonspecific and diffuse perivascular round cell infiltration, especially in the hypothalamus, and degeneration of ganglion cells in the brain have been described.<sup>19</sup>

Most students of the matter agree that atrophic cirrhosis is a rare sequel to viral hepatitis, but it does occur (fig. 2). It cannot be assumed that

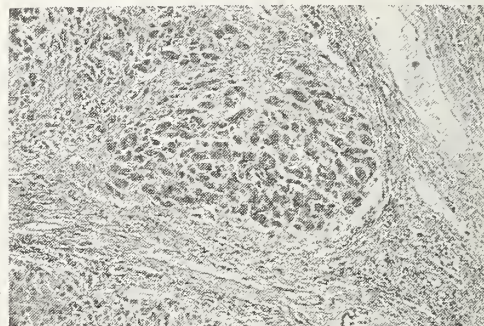


Fig. 2. Photomicrograph (x100) illustrating posthepatic cirrhosis.

the mere histologic predilection of the degenerative process for the center of the lobule precludes this possibility. In fact, there may be an early fibroblastic proliferation in the periportal zone and a steady progression to the point of actual portal obstruction with its attendants.<sup>18</sup> Continued vigi-



lance alone will resolve the problem of the ultimate pathologic fate of livers, the seat of earlier viral hepatitis.

The epidemiology of viral hepatitis has received serious study during World War II. The observations on homologous serum (including postvaccinal) jaundice and postarsphenamine hepatitis have established their causal relation, although their long incubation period (six weeks to six months, usually ten to fifteen weeks) led to some confusion. Naturally occurring hepatitis in the Army presented unanticipated as well as obvious problems in epidemiologic definition. Garrison life was the exception in most areas, and even there the population was singularly fluid. In active military operations the ordinary incubation period (three to five weeks) served to obscure the trail of infection. A few isolated instances of circumstantial evidence incriminated the water supply. An epidemic in a summer camp for boys and girls in the East afforded clear evidence of this mechanism of spread.<sup>20</sup> In general, insect vectors have been cleared of culpability, but the fly may in certain instances act as a mechanical conveyor of the virus.

The clinical onset of viral hepatitis is insidious as a rule. Certain observers record a febrile prodromal period of a few days to three weeks characterized by malaise, headache, lassitude, arthralgia, anorexia, cramps and diarrhea. Upper respiratory symptoms have initiated the disease in other epidemics. Extreme distaste for food and for smoking may be the earliest prodromal symptoms. Nausea is the rule, and vomiting occurs in a minority. Early abdominal discomfort may be vague and unlocalized. In others there may be actual pain, heavy and dragging, in the epigastrium or right hypochondrium. Constipation prevails. Physical sluggishness and mental ineptitude are variable in degree. Actual depression may occur. The febrile reaction is inconstant, but as a rule it is moderate. Preicteric itching is infrequent. Jaundice usually appears three to six days after the onset. With its advent there is a sharp abeyance in the constitutional symptoms. However, 10 to 15 per cent of these patients escape clinical jaundice.

The icterus first makes its appearance in the sclerae and palate. Latent jaundice is sometimes rendered perceptible by producing an intracutaneous wheal of .10 mgm. of histamine hydrochloride (Klein) or of normal saline solution. In the contrast of the wheal with the surrounding skin, the bile pigment stands out in sharp relief, and it may be further accentuated by the pressure of a glass slide. Early, one of a variety

of skin eruptions may be noted. The commonest types are erythematous, macular, papular and urticarial. The urine is dark and the stools light in color in most instances. Acholic stools appear in approximately 50 per cent of the patients. Characteristically bradycardia prevails until the jaundice subsides. The liver is enlarged and tender. Direct ulnar percussion over the liver elicits deep seated discomfort or actual pain. Percussion over the right lower axilla excites reflex spasm of the right upper rectus. The spleen is palpable in 75 per cent of these patients. Much stress has been placed upon lymphadenopathy in viral hepatitis. General lymphoid hyperplasia is the rule, but localization to the right anterior cervical chain has not been confirmed in the larger experience.

The blood count in viral hepatitis is highly significant. Anemia is inconspicuous unless cirrhosis supervene. Then a hyperchromic, macrocytic picture may appear. Early in the clinical course leukopenia is the rule. The differential formula is a relative lymphocytosis with an absolute monocytosis.<sup>21</sup> The lymphocytes may present nuclear mottling reminiscent of infectious mononucleosis, but the heterophile antibodies are missing in viral hepatitis. The icterus index and the quantitative van den Bergh are essential criteria of the biliary dysfunction. The total serum proteins may fall with maintained hepatic change, and under these circumstances inversion of the albumin-globulin ratio obtains. Prothrombin levels of the blood occasionally fall, and the fibrinogen content may be sharply reduced in severe instances of the disease. The cephalin-cholesterol flocculation test varies widely in its trustworthiness and clinical significance. Early, urobilinogen is found in excess in the urine. Later, the dark color of the urine is largely explained by bilirubin. The stool shows a reduced content of bile, but only in about 50 per cent is bile pigment completely lacking. The fat distribution in the dried stools is: total fat, 46.7 per cent; free fatty acid, 30 per cent; and combined fatty acid, 16.7 per cent.<sup>10</sup>

Among the multitudinous tests for hepatic function, none proved entirely satisfactory. A number of modifying factors contribute to this situation. The liver has many functions and the coincidence of a histologic injury and the specific test of functional integrity may be fortuitous. Furthermore, the margin of hepatic safety is wide. Approximately 80 per cent of the normal liver may be lost without impairment of function. The capacity for regeneration of the liver is astounding and marked quantitative loss of hepatic parenchyma may be replaced in short periods of time.

Admitting that a small proportion of the patients with viral hepatitis (10 to 15 per cent) may be anicteric, determinations of the icterus index and the serum bilirubin (quantitative van den Bergh) may disclose latent jaundice. In the subjects with obvious jaundice these studies afford a general guide to the course of the disease. Inversion of the albumin-globulin ratio indicates serious hepatic injury. A depletion of the prothrombin may reflect the failure of absorption of vitamin K from the intestinal tract, but the failure to regenerate prothrombin or to maintain the initial advantage upon the parenteral administration of vitamin K is direct evidence of hepatic parenchymal damage. The cephalin-cholesterol flocculation test (Hanger) may afford an excellent diagnostic index in reliable hands, but a wide range of dependability was encountered in Army hospitals. If positive, its trend has an important prognostic significance. Similarly, bromsulphalein has certain advantages. Hippuric acid synthesis (Quick) will be found useful in certain instances, but there is a striking lack of correlation with the clinicopathologic picture. Galactose and levulose tolerance studies have proved untrustworthy in viral hepatitis. Studies of alkaline phosphatase and of cholesterol esters are not in wide favor, but they are based upon sound principles of disturbed metabolism.

Viral hepatitis is, by and large, a benign infection. In the European Theater of Operations, of 22,223 suffering from the disease only sixty-eight or 0.3 per cent died (tentative figures). In a limited group of 146 patients with homologous serum jaundice, after transfusions of plasma, whole blood or both, fourteen died (9.5 per cent).<sup>22</sup> The ordinary course of hepatitis covers three to four weeks, although the patient experiences prompt subjective improvement as a rule upon the appearance of icterus. The constitutional symptoms abate, the appetite returns, and the urine and stools resume normal color. In the more seriously affected, the febrile period is more protracted and the prostration more marked. The jaundice, which commonly disappears in two or three weeks, may persist for months. The degree of icterus is no guide to the gravity of the illness. In the fulminant subjects with hepatic necrosis, death may come without jaundice; but with advancing hepatic injury, if time be given, the icterus is usually deep. Occasionally evidences of portal obstruction with ascites appear in the active course of the disease. As a rule this is a transitory manifestation, but occasionally it may represent an irreversible state. The most ominous situation attends acute hepatic necrosis. In

most instances this overwhelming catastrophe is portended by extreme prostration. Delirium supervenes. Mental confusion and coma terminate in death within 7 to 10 days. Few individuals with acute hepatic necrosis regain consciousness or survive after cholemic coma. Chronic hepatitis is a poorly defined entity, but it may be anticipated in a certain proportion of individuals whose capacity for histologic and physiologic restoration is limited.<sup>23</sup> It must not be permitted to develop into a diagnostic wastebasket.

The differential diagnosis of viral hepatitis entails little difficulty in the mass of young adults in the Army. The cardinal features of the disease include marked distaste for food, jaundice, abdominal discomfort with hepatic enlargement and tenderness, leukopenia, and urobilinogen or bilirubin in the urine. The clinical course will differentiate viral hepatitis from other causes of intrahepatic obstructive jaundice. The history, nature of the abdominal discomfort, course, leukopenia, and laboratory evidences of hepatic injury will distinguish this condition from cholecystitis with cholelithiasis. At times jaundice from neoplastic obstruction of the common duct may constitute a serious diagnostic problem. Again the courses and the evidences of hepatic parenchymal injury may afford the balancing evidence in favor of viral hepatitis. Spirochetal jaundice (Weil's disease) may present a serious problem in diagnosis. The disproportional prostration and the urinary findings distinguish this condition from viral hepatitis. The demonstration of the leprospirae icterohemorrhagiae by the dark field requires an expert and should be discountenanced in the routine laboratory, but animal inoculation and appropriate agglutination studies will fix the etiologic responsibility. Infectious mononucleosis may be complicated by jaundice. Usually this circumstance arises relatively early in the course and the clinical manifestations, sore throat, lymphadenopathy, splenomegaly, blood picture and heterophile antibody titer leave no doubt of the primary responsibility. In three instances encountered in the European Theater, frank viral hepatitis was succeeded by infectious mononucleosis. Occasion should be taken to indicate the propriety of the inclusion of all forms of viral hepatitis (infectious hepatitis, homologous serum jaundice, and postarsphenamine hepatitis) under a single head until subsequent studies fix their identity or independence.

The establishment of a virus etiology for infectious hepatitis imposes the necessity for measures to control its spread. In the first place, two modes of communication have been postulated and



evidence of their operation established, namely, droplet and fecal contamination. The latter is the readier of control, especially in civilian life. It formed a tangible but restricted area of attack in military practice. Apparently ordinary levels of chlorine content for drinking water are not sufficient to kill the virus of hepatitis.<sup>20</sup> Boiling or a higher concentration of chloride is required. Droplet control is not widely practiced. The isolation of patients with viral hepatitis is recommended on theoretical grounds, and by the same token infectious precautions in their care are sound. The incidence of cross infections and of secondary instances among hospital attendants is appreciably higher than in the non-contracts, but it did not constitute a major problem in the European Theater. The danger of hepatitis from homologous serum is ever present. Careful history-taking of prospective blood donors should include direct inquiry as to jaundice. No individual who has had jaundice within one year, should be used as a donor. Under circumstances of unusual emergency, the differentiation of the mechanism of the jaundice may dictate the expediency of the utilization of blood or blood products, if viral hepatitis can reasonably be eliminated. The protection of gamma globulin (10 cc. intramuscularly) is urged before each transfusion of blood or its derivatives<sup>24</sup> although the latest returns have not substantiated the earlier enthusiasm.

Specific therapy is lacking in viral hepatitis. Gamma globulin is without effect in the active stage of the disease.<sup>20</sup> Rest and diet are the sheet anchors of the treatment. Not only does premature effort induce relapses, but it also materially extends the actual period of morbidity. Furthermore delay in the initiation of rest will lengthen the course of the disease. From extensive observations the approved diet for these patients should be high in carbohydrates and proteins and low in fats. The usual Army routine includes 4 to 5 gm. of carbohydrate and 2 gm. of protein per kilo of body weight. The protein should not exceed a total of 200 gm. The fat is maintained below 60 gm. per day if possible. Vitamin B supplements are strongly recommended. The sulfhydryl compounds (S-containing amino acids) commend themselves strongly on experimental grounds. A carefully controlled survey of this subject was conducted in the European Theater. Methionine, cystine (and choline) and casein digest were used without influence on the clinical course or significant difference in the periods of hospitalization of patients with viral hepatitis.

In the presence of intractable vomiting parenteral fluids, preferably glucose solution, will be

required, but in a few instances plasma or whole blood transfusions acted almost specifically in controlling nausea and vomiting. The latter agents are likewise indicated for the control of anemia and hyperproteinemia. Although vitamin K is the direct antidote for hypoprothrombinemia, transfusion of fresh whole blood may be required in the presence of a measure of liver injury that precludes the utilization of vitamin K for the formation of prothrombin.

The existence of profound histologic and physiologic disturbance in the liver should dictate certain cautions. These patients tolerate opiates and barbiturates poorly. Sulfonamides should be eschewed unless the bacterial indication for their use transcends the possible further hepatic injury. Fortunately penicillin and other antibiotic agents are now ready substitutes for the sulfonamides. Alcohol must be interdicted for at least six months after the acute phase of hepatitis.

Convalescence from viral hepatitis is commonly tedious. Army experience found no physical nor laboratory criteria of infallible value in establishing a cure. Arbitrarily, icterus indices above 15 units and serum bilirubin levels in excess of 2.5 mgm/100 cc. precluded physical activity. With singular regularity all Theaters came to the same conclusion. The capacity of the hepatic patient to accomplish physical effort is the best measure of convalescence. In certain areas exercise tolerance tests were carefully graduated.<sup>25</sup> By common consent, the soldier was not adjudged completely recovered if such physical effort induced subjective discomfort or objective signs of reactivated disease. Anorexia, nausea, and distress to actual pain in the right hypochondrium or epigastrium, enlargement and tenderness of the liver, and increases in the icterus index and blood bilirubin attended premature or excessive exertion. In the European Theater the routine left the physical initiative to the patient. Early observation proved that relapses were too frequently traceable to enthusiastic ward officers and overzealous commanding officers who pressed these patients beyond their physical capacity. Under the ultimate conservative management such patients were permitted to leave their beds when the desire and strength permitted. Latrine privileges followed. Work about the ward and walking ensued, then came graduated exercise. The soldier was not returned to full duty until he could do a five-mile route march with pack without adverse symptoms or signs.

In summary, the medical experiences of World War II have elucidated much of the natural history of so-called catarrhal cholangitis. A true

hepatitis exists and its viral origin has been established. Hence, the designation, viral hepatitis, should be adopted. The nasal washings, duodenal contents, feces, and blood of patients with viral hepatitis contain the infective hepatotoxic agent. Infectious hepatitis, homologous serum jaundice, and postarsphenamine hepatitis are closely related or identical states. The epidemiologic pattern of the naturally occurring hepatitis closely follows that of poliomyelitis. Measures of control of its spread have not been fixed. Gamma globulin may prove useful in epidemic periods and in prophylaxis against homologous serum jaundice. Hepatic functional tests have a limited place in its diagnosis and prognosis. Rest, and a high carbohydrate, high protein, and low fat diet are the most important elements in its active therapy. Convalescence and complete recovery are delayed by premature effort.

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## THE TREATMENT OF BURNS

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There have been numerous articles dealing with the various aspects of the problem of burns published in the past four or five years. These have recorded the results of clinical and experimental observations and have dealt not only with the local injury and its treatment but the systemic disturbances produced by the injury and their treatment. They have recorded the experiences of civilian surgeons caring for the injured in such catastrophes as the Coconut Grove and Hartford fires and those caring for numbers injured in the ordinary garden variety of accident. They have given the experiences of Army and Navy surgeons in handling those wounded in line of duty, either on the battlefield or in the G. I. kitchen by the explosion of a gasoline stove. I am sure that I can add nothing to the literature, for my experience in civilian practice has been similar to that of most of you in that only occasionally do I see a burn of such an extent that hospital care is required. Moreover, my experience in the Army as a member of the surgical staff of an evacuation hospital was limited to the care of the burn patient for a period of only three to five days, at which time he was ready for evacuation to the rear.

A burn is a serious injury, however, and the care of a patient with a severe second or third degree burn presents problems that demand from the doctor and others assisting in the care the utmost in skill and patience. Hence, it seems timely to present some of these problems, even though there is nothing that is new and perhaps much that may seem trite.

We are not concerned in this discussion with the minor first degree burns or the minor second degree burns that present no particular problem as far as the patient is concerned except to say that a burn is a wound that is potentially infected, and it should be treated in such a way as to insure healing without infection. I propose to discuss: first, the systemic disturbances produced by burns and their treatment; second, the local wound and its treatment.



The early systemic disturbance following a burn is shock. This may be mild or it may be severe. It accounts for nearly all of the deaths in the first twenty-four to forty-eight hours. There are certain things about the shock in burns that should be emphasized. First, it is pretty well agreed that the development of shock is dependent more upon the surface area of the body involved than on the degree of the burn. That, I think, is readily understandable. Second, the signs of shock may not be present early and may not present themselves until shortly before collapse occurs. As treatment is more effective if started early, it is best to assume that shock exists in all severe burns, that is, if more than 10 per cent of the body surface is involved. If one waits for the classical signs of shock such as rapid thready pulse, low blood pressure, and cold clammy skin to appear, one may not be able to effect a reversal of the pathologic physiologic disturbance. Third, it should be emphasized that burns of certain areas, particularly the face, abdomen, and genitalia produce more shock than burns on other parts of the body.

The cause of shock is a combination of factors. Primarily, the so-called "psychic" shock is a factor and is dependent upon the pain, fear and apprehension associated with a sudden severe injury. The rôle that this factor plays is variable with the circumstances of the injury and the temperament of the individual. Secondary shock follows closely the primary shock. The most constant factor in secondary shock is a decrease in circulating blood volume brought about by a loss of blood plasma into the burned area and probably into the tissues adjacent to the wound. This loss of plasma is due to an increase in the permeability of the capillaries, and it results in hemoconcentration, which is one of the most constant findings in shock due to burns. This loss of plasma begins almost immediately and may last for a period of forty to forty-eight hours. Most of the loss, however, has been thought to occur in the first six hours following injury. The total loss of plasma may be tremendous and in severe burns may be as much as 30 to 50 per cent of the total circulating plasma volume.

The second important systemic effect of burns is toxemia. This begins after the stage of shock and is characterized by fever, albuminuria, hematuria, delirium and vomiting. The cause of the toxemia is debatable, and several factors must be considered. The question of a burn toxin originating from the breakdown of the burned tissue always arises, but Mason states that "there is no general agreement as to whether there is a burn

toxin, and if there is, as to its nature, and still less agreement as to the source of the toxin if we admit, for sake of argument, that such a product is present." Infection is certainly a factor in the toxemia and must be considered to be contamination from unsterile clothes or dressings or from the nose, mouth, and hands of the individuals caring for the patient. Infection is a constant threat until the wound has completely healed. Another factor that may play a rôle in the toxemia may be inadequate treatment of the state of shock or a delay in instituting treatment for shock. This may result in irreversible changes in the parenchymal organs, particularly the kidneys, heart, and liver which in turn result in eventual collapse. These irreversible changes may occur in shock due to any injury and were seen in many wounded soldiers in the recent war. During the toxic stage, and in fact until the wound is healed, there may develop secondary anemia, deficiency of plasma proteins, and disturbance in electrolyte metabolism.

These systemic disturbances demand prompt, intelligent treatment. Sedation in the form of morphine should be administered to control pain. This should be given in adequate doses dependent upon the size and age of the patient. Since there is loss of blood plasma with hemoconcentration, the most important aims of the treatment during the shock stage are: first, to prevent further loss of plasma; second, to replace the plasma that has been lost. Other aims should be to provide other fluids with electrolytes that are lost from the burned surface and to provide fluid, particularly water, for adequate urinary excretion. In order to provide adequately for these, a total of from 4,000 to 8,000 cc. including plasma, physiologic sodium chloride, and water may be necessary in the first forty-eight hours.

The most important part of the treatment of burn shock is the administration of plasma. The decrease in circulating blood volume and the hemoconcentration are due solely to the loss of plasma and will be corrected by adequate amounts of plasma administered intravenously. The amount given should be adequate as judged by the clinical response of the patient and a reduction in the hematocrit to the normal of 45 and the hemoglobin to the normal of 100 per cent or 15 grams per 100 cc. of blood. In cases of extreme shock rather large amounts of plasma can be given quickly, but it should be remembered that the increased capillary permeability lasts for some time and that a considerable portion of the plasma given may be lost. The amount computed to be necessary can be given in divided doses at inter-

vals of three to four hours or slowly by the continuous drip method. In a recent case under our care, 2,500 cc. were given in divided doses in a period of fifteen hours to effect a reduction of the hematocrit from 58 to 44. If plasma therapy has been adequate, it is rarely necessary after the first forty-eight hours.

There are various methods of estimating the amount of plasma that may be necessary. These are based upon: first, the hemoconcentration; second, the area of the burned surface.

A. Hematocrit—give 100 cc. plasma for each point the hematocrit is above the normal 45.

B. Hemoglobin—give 50 cc. plasma for each point the hemoglobin is above 100 per cent or 300 cc. for each gram above the normal of 15 grams per 100 cc. of blood.

C. Red blood cell count—give 100 cc. plasma for each 100,000 the red cell count exceeds the normal of 5,000,000.

It should be remembered that these methods of computation may all be misleading in the first hour or two after injury, for the hemoconcentration may be progressive for several hours and any individual reading tells only the condition at the particular hour it is taken. Consequently, if one is using the hematocrit, hemoglobin, or red blood cell count to determine the degree of hemoconcentration, checks should be made every few hours to be sure the treatment is adequate.

If one elects to use the area of the burn as the guide for plasma therapy, in the first twenty-four hours one should give 500 cc. for each 10 per cent of the body burned. In the second twenty-four hours about one-half this amount should be given. For this purpose surface area estimates are: trunk, 38 per cent; lower extremities and buttocks, 39 per cent; upper extremities, 18 per cent; and head, 6 per cent.

During the stage of shock, additional fluids must be given to provide for salt depletion and to maintain a satisfactory urinary output. If the patient is vomiting, normal saline or glucose in water can be given intravenously, being cognizant of the fact that it is possible to overload the circulation, particularly in the presence of cardiac or renal disease.

The prevention of further loss of plasma will be discussed under the local treatment of the burned area. Adrenal cortical extract has been shown to have some effect in lessening the increased permeability of the capillaries. It may be used, though its value may be questioned. Oxygen may be of value in relieving the anoxia.

The general treatment of the patient in the stage of toxemia, anemia, and hypoproteinemia is di-

rected toward the maintenance of proper fluid balance, the control of anemia, maintenance of body protein, and the control of infection. Proper attention to these factors will maintain the nutrition of the patient and exert a tremendous influence on the healing of the wound. The fluid intake should be sufficient to insure a daily urinary output of at least 1,500 cc. Periodic checks should be made to determine the blood chloride level since there is a tendency to hypochloremia. If necessary, sodium chloride should be given by mouth though in adequate amounts it may produce nausea. Frequent hemoglobin determinations and red blood cell counts should be made and transfusions used to maintain them at normal levels.

The importance of maintaining the nutrition of patients with burns and the effect of malnutrition on the healing of the wounds has recently been stressed by Levenson, Davidson, Lund, and Taylor who studied a group of thirty-two patients with respect to their nitrogen metabolism and their nutritional demands. They found that in severe third degree burns high caloric, high vitamin diets with up to 400 gm. of protein per day were necessary to maintain adequate nutrition in some patients. They suggest formulae for tube feedings if they are necessary to supplement what the patient can take orally. The value of amino acid therapy should be kept in mind in this connection.

The local treatment of the burned area in a minor burn of first or second degree is not a matter of concern to us here. Any one of a number of so-called local treatments, if they do no harm, will suffice. The local treatment of an extensive burn is a matter of great concern, however, because proper treatment can do much to influence the systemic effect of the injury. One of the advantages of the tannic acid treatment advocated by Davidson was that it provided a means of covering the wound and limited the loss of fluid into the wound. The "cleansing, pressure dressing, and rest treatment" advocated by Koch and others has done much to effect a reduction in mortality and morbidity in cases of severe burns.

It seems sound logic to regard a burn as an open wound that is contaminated, as Koch and others have emphasized. Therefore, the aim of the local treatment should be to convert the wound into a clean, sterile wound; to keep it as sterile as possible until healing has taken place; and to effect healing, i.e., closure, as soon as possible.

Local treatment should start from the time of injury. It is natural for everyone to want to put something on a burn to get it covered up, using preparations that have been time honored. I think



we could do much to prevent infection in these wounds if we could educate doctors as well as laymen to the fact that it is not necessary to "put something on" a burn and that putting something on an open wound does not control pain but only provides one more avenue of infection. Just as an incised or lacerated wound should be covered with a sterile dressing, so should a burn. If a sterile dressing is not available, a clean sheet or a clean towel should be used. Pain can be controlled by the use of morphine. Once the wound has been covered and a sedative administered, the patient should be hospitalized where his condition and the extent of the wounds can be properly appraised. If shock is not severe, local treatment can be started while plasma is being administered. If shock is severe, its treatment takes precedence over local treatment.

It should be stressed that in caring for the local wound strict aseptic precautions should be taken. The patient should be placed on sterile sheets on the operating table. All personnel should be capped, masked, and those taking part in the direct care of the wound should be gowned and gloved. The face mask should cover the nose as well as the mouth. Anesthesia is usually not necessary and may be harmful, particularly if there has been inhalation of smoke or fumes. Morphine will suffice. The wound is gently washed with warm water and white soap using cotton or gauze, not brushes, and irrigated with saline following which all dead skin and blisters are removed with sterile forceps and scissors. The wound is again washed and irrigated; strips of fine mesh, vaselined gauze are then applied followed by flat gauze dressings and then fluffed sponges. These are held in place by gauze bandages. Pressure is obtained by a layer of mechanics waste, cotton, or cellulocotton held in place by Ace bandages or muslin rolls. These pressure dressings can be used on the face and hands as well as other parts of the body. Stockinet makes a satisfactory material for holding the dressings on the face and head. The dressing should be left undisturbed for a period of from eight to fourteen days unless infection becomes apparent. They can be reinforced if necessary. At the end of two weeks most second degree burns will have healed if infection has not occurred, and by that time a good deal of the slough in third degree burns will have separated or can be removed with forceps and scissors. The dressing is then reapplied. If infection has developed, warm moist dressings are applied using saline, boric, or Dakin's solution. It may be elected to use one of the sulfa preparations locally at the initial dressing. Some recent reports indi-

cate that the sulfonamides may be combined in an ointment base in such a way that the absorption may be slowed so that toxic effects are not likely to occur. It is probable that sulfonamide dressings are of little value after infection has taken place.

When the slough in a third degree burn has separated, the wound should be covered by skin grafts as soon as possible. If the wound is large, it is not necessary to wait until the entire wound is ready for grafts; it can be grafted in stages. The technic of grafting is beyond the scope of this paper. If the wound is small, pinch grafts or Thiersch grafts cut with a razor will suffice. For larger wounds the dermatone can be used.

Chemotherapy has an important place in the therapy of burns. If sulfonamides are used locally at the initial dressing, additional amounts should not be given until certain cautions have been observed. There should be a minimum daily urinary output of 1,500 cc., the urine should be free of red blood cells and sulfa crystals, the blood should show no evidence of sulfa toxicity, and the blood sulfa level should be determined since the degree of absorption of the drug from the burned area is unpredictable. If sulfonamides are not used locally, they can be started systematically, care being taken to observe the criteria just mentioned. Sulfadiazine is the drug of choice and can be given orally or intravenously in the form of the sodium salt. Penicillin can be used in place or concurrently with the sulfonamides. It is difficult to prove just how valuable these drugs are in controlling infection. Evidence is available that indicates that while they may be of little aid in controlling the local infection, they are effective in controlling infection beyond the wound area and are especially valuable in preventing pulmonary infections. My personal preference is to start sulfadiazine orally and/or intravenously as soon as the condition of the kidneys will permit and to use penicillin if gross infection occurs in the local wound.

Lastly, the importance of good nursing care should be stressed. Patients with extensive burns are sick patients. They require and deserve intelligent and careful nursing care. This can do much to bolster morale and hasten recovery.

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### Discussion

**Dr. Draper L. Long**, Mason City: In the past war, my experience has brought out two very important trends in the treatment of severe burns.

First of these, I think, is the importance of systemic treatment to badly burned patients and the following through of it until they are out of danger. I am glad Dr. Down put this at the head of his paper because I believe this is the all-important point in the treatment.

Secondly, the consensus of opinion now seems to favor bland ointments such as vaseline gauze strips and pressure dressings for the local treatment.

This does not mean that treatment with tannic acid or with sulfonamides has been discarded, but it is a trend.

In conclusion, I wish to re-emphasize, by enumeration, certain points, most of them discussed in Dr. Down's paper:

1. It is important that patients who have second and third degree burns large enough in area to cause shock or toxemia be hospitalized.
2. Anticipate shock and treat it before the first symptoms appear.
3. Adhere to strict asepsis in the local treatment.
4. In debridement, be careful about removing too much so-called dead skin. If it is doubtful, I believe it should be left on. Consider the harm, also, that could be done to the skin by removing home remedies too brusquely in order that your favorite ointment might be applied.
5. Avoid boric acid wet dressings in clearing up infected burns because of their possible toxicity.
6. It is important to keep the pressure dressings on for from ten to fourteen days if possible.

### PAPILLEDEMA

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Edema of the nerve head is usually thought of in terms of choked disc, but papillitis and neuroretinitis also owe their appearance to an edematous state of the tissue. The three conditions are similar in that the disc margins are blurred in all, but each is distinctive in its characteristics and diagnostic importance. Papillitis at the present time is infrequent in occurrence, yet during the period prior to the introduction of the Wassermann reaction and arsphenamine it was an important diagnostic sign of syphilis. This affection

of the nerve head is of inflammatory origin, and the edema of the papillary tissues is the direct result of the congestion and exudation of inflammation. Usually the swelling is accompanied by a profound loss of vision, a fact that is of great importance in differentiating it from choked disc. Frequently the vision is lost suddenly and completely, but gradual loss over a period of two or three days may occur. Gradual improvement in vision usually follows the course of resolution of the edematous nerve head, and at the termination of the inflammation the vision and visual fields are normal or nearly so. In the more protracted and severe cases, some degree of optic atrophy and loss of vision may result. Occasionally the inflammatory reaction is so severe that the surrounding retina and macula are involved and the appearance of the fundus is that of a neuroretinitis. Even in these patients, however, a return to normal vision may be expected.

Choked disc can no longer be considered as an early sign of intracranial disease, for newer methods of neurologic diagnosis have facilitated the early recognition of brain tumors before great changes have occurred in the brain or cerebrospinal fluid circulation. Consequently, the incidence of nerve head edema in intracranial neoplasms has declined steadily, and the reported frequency of 80 per cent that appears in the older literature has been reduced greatly. When a tumor is located in a silent region or when any tumor has been growing for a long time, however, an increase in the intracranial pressure occurs and a choked disc is usually present. The direct etiologic relationship between increased intracranial pressure and the choked disc is generally recognized, but a complete understanding of the underlying physiopathology has not been reached. It is readily understood that an increased pressure in the subarachnoid space of the optic nerve can compress the central vein as it leaves the optic nerve, causing congestion of the retinal vessels, and that this alteration in venous pressure so affects the vascular physiology that resorption of tissue fluid by the venous capillaries is impaired and edema of the tissues results. It is not apparent, however, why the edema thus produced is limited to the nerve head while the retina retains its normal appearance, but it may be that the normal retina resists the accumulation of tissue fluid or unrecognized perivascular channels may carry it toward the nerve head as rapidly as it forms.

Occasionally increased intracranial pressure is not accompanied by edema of the disc despite the fact that the cerebrospinal fluid pressure is very high. This circumstance is encountered more

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often in cerebral abscess but may be seen when tumors are present. Also anomalous are those cases in which a choked disc is present but in which the spinal fluid pressure is normal.<sup>1</sup> In some of the latter patients a high cord tumor may interfere with cerebrospinal fluid circulation and because of the block a true value for the intracranial pressure is not obtained, but in others one can only speculate that the pressure varies from time to time and, by coincidence, a normal reading is obtained.

Usually a choked disc develops slowly and once present remains until the cause (increased intracranial pressure) is removed. Variation from day to day may be seen occasionally, however, especially in the early stages, but such observation must be weighed with due consideration for errors in interpretation. Sometimes papilledema does not occur until after operation for the relief of increased intracranial pressure, or similarly a slight elevation may be increased in severity on the days immediately following craniotomy. Elevation and edema are not always in direct proportion to the amount of increase in cerebrospinal fluid pressure, but most frequently a long standing pressure will produce more swelling than will a lower pressure of short duration. In very long standing choked disc, the gradual development of optic atrophy causes scarring of the disc tissues and decreased edema.

Little has been written concerning the resolution of choked disc following operation for brain tumors. The initial response may be an increase in the amount of swelling; this is particularly true when the operative manipulation necessary for removal of a tumor is extensive. However, if the choked disc is slight in amount, has been present for a short time, and the required operative procedure is simple, it may disappear in from twenty-four to forty-eight hours. More commonly, there is a gradual subsiding of the edema, and several days may elapse before any perceptible change is observed. When the surgical intervention has resulted in considerable trauma and distortion to the brain and if the elevation of the disc has been great, it may be two weeks before definite reduction in the amount of swelling has taken place. When the edema of the nerve head has not subsided within two weeks of the operation, one becomes suspicious that the operative intervention has been ineffective. If choked discs persist three weeks after operation, one can be certain that the operative treatment has failed.

Occasionally one encounters a patient with bilateral choked discs and increased intracranial

pressure but in whom there is little additional evidence of brain tumor. Roentgenography after injection of air into the ventricles or subarachnoid space and exploration may disclose no evidence of tumor, and biopsy of brain tissue discloses an edematous state of the tissue. Decompressions have been made in treatment of these patients with pseudotumors, and it has been determined from this that wide and rapid fluctuations in intracranial pressure occur as a result of transient edema of the brain.

As a complication of the retinopathies of hypertensive vascular disease, arteriosclerosis, leukemia, and nephritis, one may observe a swelling of the nerve head which extends into the surrounding retina. This is not a simple extension of edema from the retina to the nerve head, but as shown in 1936,<sup>2</sup> is due to increased intracranial pressure. In every instance of neuroretinitis studied, the spinal fluid pressure was above 240 mm. of water. Post-mortem investigation of the brains of some of these patients disclosed only a generalized edema of the brain to account for the increased intracranial pressure. Reduction of the intracranial pressure results in a decrease in the amount of papilledema as well as in amelioration of the general symptomatology. Presumably the choked disc form of papilledema occasionally encountered in hypertensive vascular disease is of the same etiology, yet in these cases the retina remains normal except for the profound vascular changes that are so apparent in the arteries. Of a similar nature are the choked discs that occur in patients in the terminal stages of subacute bacterial endocarditis. It is assumed that in this event the profound anemia is responsible for poor cerebral nutrition which leads to an edema of the brain.

A discussion of papilledema would not be complete without the mention of the pseudochoke or pseudoneuritis. Unfortunately, all of the differentiating signs of this condition are not sufficient in every instance to positively differentiate it from choked disc. Not always is the physiologic cup encroached upon or obliterated early in the course of choked disc, for patients with proved brain tumors have been seen in whom a diagnosis of pseudochoke was imperative because of well defined physiologic cup and the equivocal state of the veins. Furthermore, a pseudochoke existing in a patient with a syndrome suggesting brain tumor may present a formidable problem to the ophthalmologist. One must carefully look for hemorrhages and engorged veins, consider the refraction, and delineate the blind spot by perimetry in order to reduce the possibility of errors

- in these patients. Frequently only repeated examination after an elapse of several weeks will enable one to correctly evaluate the condition.

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## PRINCIPLES OF MILITARY SURGERY APPLICABLE TO CIVIL PRACTICE

With Especial Reference to Acute Traumatic Lesions

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The general surgeon in civilian life is the counterpart of the military surgeon in the advanced echelon of the combat zone. The early and oftentimes definitive care of patients suffering the results of acute trauma is his responsibility.

The principles governing the care of these patients, which have been so adequately demonstrated in military surgery, must now be transferred to the field of the civilian surgeon, and in some instances they may have to be learned for the first time by those who did not have an opportunity to serve in forward echelons.

It is proposed to briefly emphasize here certain of these basic principles which must be kept before the mind of the surgeon in civil practice. It is not intended to present a complete and exhaustive review of progress rightly belonging in the field of the specialist.

Adequate shock therapy is the obligation of every physician dealing with acute trauma. The occasional operator in the small hospital is prone to minimize preoperative and postoperative care, especially when dealing with shock. Much has been written as to what constitutes adequate therapy, but unfortunately there are still too many so-called surgeons who content themselves with the administration of a unit of plasma or saline and an ampoule of epinephrine and tell the family they have treated the patient's state of shock. Rest, plasma, and whole blood in quantity in combination with effective doses of morphine, all intelligently administered, constitute the basis of shock therapy available to the average general surgeon today. These are essential in the early management of the severely wounded patient. It should be noted that generalized burns in the average otherwise healthy adult often require considerably larger dosages of morphine than has been previously accepted.

Adequate anesthesia is the second major prin-

ciple requiring emphasis. Everyone is familiar with the physician who literally apologizes to the patient for the discomfort he causes him while he picks out superficial particles of contamination and paints the wound with some antiseptic, either because the doctor doesn't have facilities for better anesthesia or because he is indifferent to or untrained in its use. It is impossible to adequately care for a wound in a patient not properly anesthetized. Sufficient anesthesia requires complete relaxation and complete loss of sensation in all parts of the wound without undue added risk to the patient. Anything short of this is inadequate. The place of anesthesia and the trained anesthetist is incontestable when dealing with thoracic-abdominal wounds. While these are not too frequent in civil practice the well prepared surgeon must be trained and equipped to meet the possibility. A carefully administered endotracheal anesthesia using positive pressure methods as indicated may well be the factor which avoids a mortality in such wounds.

Thorough debridement is essential to maximum results in wound care. This presupposes adequate exposure and a sound knowledge of surgical anatomy. In order to be thoroughly debrided, all depths and all ramifications of the wound must be explored with the removal of all devitalized tissue, blood clot, and foreign matter. Thoroughness here is paramount. Copious lavage with sterile normal saline is a useful and much used adjunct in the completion of this procedure.

The amount of reconstructive effort utilized in any wound must necessarily be governed by the existing situation. Primary factors entering into such a decision include the total lapse of time from onset of injury, type of injury, degree of contamination, opportunity to supervise care of the patient postoperatively, and in no small degree the capabilities of the surgeon. Thus under given conditions of a clean wound seen within the first six hours and in the hands of a qualified surgeon who is able to supervise the postoperative care, tendon and nerve repair can often be undertaken primarily in civil practice. Reconstructive surgery of the vascular tree offers a broad field to the qualified men who need not be limited entirely to ligation in the management of trauma to major vessels. The management of major amputations, their level and type, will be governed by a set of similar factors.

Abdominal injuries often tax the best judgment of the surgeon. While it is not proposed to cover the entire field of possibilities, there are two features in the management of abdominal wounds which should be re-emphasized here even though



they are already well recognized by the better surgeons.

The first of these is the use of the colostomy in the management of injuries of the large bowel and rectum. As has been so well described elsewhere, this principle can be utilized either by exteriorization of the wounded segment or by use of a proximal colostomy. Jarvis has recently re-emphasized the use of the defunctioning colostomy in the major wounds of the sigmoid and rectum. The value of this procedure must be acknowledged.

The use of a drain in injuries to the solid organs of the abdomen, notably those of the pancreas and to a lesser extent the liver and kidneys, is too often overlooked by the occasional operator. Liver injuries require remarkably little pressure for hemostasis, but a well placed light drain is of distinct value in the major liver laceration to provide an exodus for biliary secretions. Major injuries to the spleen usually result in primary splenectomy.

It is an accepted fact that soft tissue wounds other than those of the abdomen, when made by rifle fire and high velocity missiles of a similar type, do remarkably well under conservative management. This fact must again be noted and the advantage of conservatism pointed out to the general surgeon.

Injuries to brain tissue fall in a separate category. Complete early debridement in the hands of the competent brain surgeon is the accepted procedure. For the benefit of the surgeon who is able to refer such injuries to the nearby neurosurgeon, combat experience has shown that best results are obtained thus, even though delays up to forty-eight hours have at times been necessitated. These patients require the benefit of active chemotherapy.

#### SUMMARY

Basic trends proven in combat surgery and too seldom recognized by the occasional operator have been re-emphasized.

Especial reference has been made to adequate preoperative and postoperative care, anesthesia, and thorough debridement and lavage with a brief enumeration of the factors governing the amount and type of reconstructive surgery undertaken.

Attention is called to the value of proximal colostomy or the exteriorization of the involved segment in injuries of the large bowel and rectum.

Major wounds of the pancreas, liver, and kidneys require a light drain as a route of exodus for any secretions, even though requirements for hemostasis may be minimal.

It is emphasized that soft tissue wounds caused

by high velocity missiles do well under conservative management.

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## EOSINOPHILIC GRANULOMA OF BONE

With Report of a Case

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#### DEFINITION

In 1940, Otani and Ehrlich<sup>1</sup> described seven cases of locally destructive granulomas involving the skull, ribs, sternum, and mastoid regions. About the same time, Lichtenstein and Jaffe<sup>2</sup> described a similar lesion involving the femur of a child which they called an eosinophilic granuloma. Since that time additional cases of eosinophilic granuloma of bone have been reported, although the condition is not a common one.

#### CLASSIFICATION

It is comforting to be able to pigeonhole a newly encountered syndrome in a scheme of classification, even though such a scheme may need to be revised with the passage of time and accumulated experience. Eosinophilic granuloma involves the reticulo-endothelial elements of the skeleton. It is not a primary disturbance of lipid storage, as are Gaucher's disease, Niemann-Pick's disease and xanthoma tuberosum multiplex. It is most simply considered as an inflammatory response to some unknown infectious agent and accordingly is akin to Letterer-Siwe's disease and Hand-Schüller-Christian's disease. Its relationship to these latter conditions has been suggested by Mallory,<sup>3</sup> with agreement by Jaffe and Lichtenstein<sup>4</sup> and Farber.<sup>5</sup> The groundwork for this correlation was established by Wallgren<sup>6</sup> who removed Hand-Schüller-Christian's disease from the primary lipid metabolic disturbances, and because of histologic similarities concluded that Letterer-

Siwe's and Hand-Schüller-Christian's diseases were different types of the same malady.

1. Letterer-Siwe's disease is a generalized hyperplasia of the reticulo-endothelial system without any constant lipoid storage in the cells. The condition is found in infants and young children rarely over the age of four years. Visceral lesions are constant although local bony tumors may occur. It is characterized by splenomegaly, hepatomegaly, lymphadenopathy, secondary anemia, and a hemorrhagic diathesis with petechiae and purpura. It is an acute condition of variable duration and all reported cases have terminated fatally.

2. Hand-Schüller-Christian's disease is a lipoid (cholesterol) storing reticulo-endotheliosis affecting a slightly older age group of children and sometimes adults. Visceral and bony lesions combine to produce the classic triad of calvarial lacunae (osseous xanthomatosis), diabetes insipidus and exophthalmus. The condition is grave, with a 30 per cent mortality.

3. Eosinophilic granuloma of bone is a skeletal reticulo-endotheliosis, and the osseous lesions may be solitary or multiple. Myelocytic or mature eosinophils make a striking contribution to the microscopic picture—hence, the name. The condition has been described in all the bones of the body except those of the hands and feet with predilection for the flat bones. In reported cases the tumor has involved the skull, ribs, vertebrae, humerus, femur, pelvis, scapula, mandible, tibia and fibula. Children and adults are affected with a uniformly good prognosis, although a fatality in a case with multiple lesions has been reported.<sup>5</sup>

These three conditions are grouped as variants of a basic disease process on pathologic (histologic) grounds. Clinically, no common denominator can be found.

#### ETIOLOGY

The cause for eosinophilic granuloma of bone is unknown. Trauma<sup>1</sup> has been indicted and may have been significant in the case to be reported here, but the history of injury is not elicited in all cases. Bacterial or virus infections have been suspected because of the cellular reaction which is typical of the microscopic picture, but definite proof is lacking.

#### SYMPTOMS

The patient with eosinophilic granuloma has no complaint other than a local painful swelling which is tender to palpation. There are no constitutional symptoms.

#### X-RAY FINDINGS

A roentgenogram of the area of painful swelling reveals an irregular destructive lesion of the medullary substance, oftentimes including the cortex of the bone and with little or no evidence of bone reaction or osteogenic activity.

#### LABORATORY FINDINGS

Eosinophilia is not constant and when found is not marked, ranging from 2 per cent to 12 per cent. Bone marrow biopsy in one case<sup>2</sup> showed 15 per cent eosinophilic myelocytes and young eosinophilic granulocytes. The other marrow cellular elements were normal. The calcium-phosphorus metabolism is normal.

#### PATHOLOGY

Grossly, the tumor material is firm, moderately vascular, and yellow in color. It may be adherent to the dura (in skull lesions) but can be scraped away without undue difficulty. The tumor is locally invasive and in the present case had extended from the anterior frontal skull to the orbital roof, and was encroaching upon the soft tissues of the orbit.

Microscopically, normal tissue is replaced by granulomatous tissue in which sheets of histiocytes predominate with segmented eosinophils, neutrophils, lymphocytes, large mononuclears, plasma cells, and fibroblasts (in healing cases). Small areas of necrosis are seen. Many of the histiocytes are phagocytic with engulfed lipoid material, eosinophilic granules and cellular debris.

#### DIFFERENTIAL DIAGNOSIS

Such an osteolytic lesion must be differentiated from metastatic malignancy, multiple myeloma, solitary bone cysts, posttraumatic bone resorption, Ewing's tumor, leukemia, Hodgkin's disease, reticulum cell sarcoma, spindle-cell or osteolytic osteogenic sarcoma, Hand-Schüller-Christian's disease, and bone infections such as osteomyelitis, lues, and tuberculosis. The history, physical findings, absence or presence of systemic disorders, and the radiologic findings make some differentiation possible. A useful table of differential diagnosis is found in the article by Osborne et al.<sup>7</sup> Final and exact determination must depend upon tumor biopsy.

#### TREATMENT

Since biopsy is needed for exact diagnosis (and prognosis), this can be combined with operative curettage and/or excision advantageously. It is suggested that tantalum cranioplasty<sup>8</sup> be made a part of the primary operation in calvarial lesions. All are agreed that surgery is indicated. There



is disagreement as to the need for postoperative radiation. Some reported cases have healed without radiation. Dr. Harold Jacox, who has interested himself in these tumors,<sup>9</sup> believes that x-ray therapy is useful, and it was he who directed the radiation therapy in the case reported here.

#### CASE REPORT

L.H.C. was an apprentice seaman. His chief complaint was tender swelling of the left lateral forehead. The patient first noted a small swelling of the left forehead about five weeks before admission. This mass slowly enlarged and became tender. The patient thought that he had struck his head on a bunk about six weeks previously. His past history included measles, pertussis and chickenpox as a child, rheumatic fever when thirteen, and a tonsillectomy as a child. He had always been well and had recently passed a physical examination for enlistment in the navy. His family history was irrelevant. The examination found a slender, well-developed white male 17 years of age. General and neurologic examinations were entirely negative except for the head. There was a palpable but hardly discernible mass just lateral to the left supra-orbital ridge. It was tender to palpation, but was not hot or discolored. It was firm, seemingly a part of the skull, and the overlying skin was not attached to it. Examination indicated urine analysis normal. Blood count showed 2 per cent eosinophils but otherwise was normal. Blood cholesterol was 187.6 mg. per cent. Glucose tolerance was normal. Basal metabolic rate ranged from minus 18 to minus 36. Roentgenograms showed an irregular bone defect in the lower anterior portion of the left frontal bone measuring one-half inch in diameter. There was no evidence of bone reaction or new bone formation.

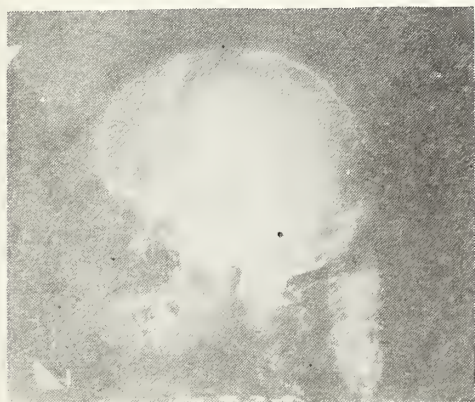


Fig. 1. Preoperative lateral roentgenogram of the skull which shows the irregular clear-cut destructive lesion of the left frontal region with the absence of any new bone formation.

The preoperative diagnosis was solitary eosinophilic granuloma of the skull.

On Dec. 15, 1945, under avertin-local anesthesia, a left frontal hairline incision was made and a frontal scalp flap was reflected downward. The anterior superior attachment of the temporal muscle was reflected to expose a rounded skull defect about three-fourths inch in diameter. The defect was filled with yellow tumor tissue and a trephine opening was placed in the skull just posterior to this lesion. By means of De Vilbiss bone cutting forceps this osteolytic lesion was excised en bloc. The tumor tissue was then seen to extend anteriorly. The involved skull was removed with a rongeur and the tumor was followed in this fashion to the superior lateral posterior portion of the left orbit. An orbital plate defect was identified and enlarged with the Kerrison rongeurs in order to remove all affected bone. The tumor tissue which had invaded the orbit was removed with a spheno-ethmoid punch. A perforated and formed tantalum plate was inserted to cover the surgically created frontal defect and secured with three triangular wedges of tantalum. The wound was closed with interrupted sutures of 000 black silk in the galea and skin.

The tumor tissue removed was entirely extradural but locally invasive, involving the superior plate of the orbit as well as the vault of the skull. The tumor was firm, yellow, homogeneous, and moderately vascular. It was adherent to the dura but could be scraped away.

#### PATHOLOGY

The specimen consisted of a piece of bone to which was attached a grayish fibrous appearing tissue 2x8x1 cm. Histologic examination showed dense sheets of cells in an edematous to thin fibrous stroma. Five varieties of cells were distinguished. The most numerous cells were large eosinophilic cells with segmented nuclei. Histiocytes were almost as numerous, some of which appeared to be phagocytizing polymorphonuclear leukocytes and pigment granules, lipid material and debris. Scattered throughout were large eosinophilic giant cells which also demonstrated phagocytosis. In other areas there were dense collections of mononuclear cells resembling lymphocytes, and scattered throughout were numerous segmented neutrophils. Some minute areas of necrosis were seen. There was moderate vascularity of the lesion. This was considered a benign lesion, etiology undetermined. The diagnosis was eosinophilic granuloma of the left frontal bone. The postoperative course was uneventful. The patient was given 600 roentgen units of radiation therapy to the skull, and thyroid

medication was given for the low metabolism. He was subsequently returned to duty.

#### COMMENT

The patient with an eosinophilic granuloma of bone presents himself with a tender soft tissue swelling overlying bone, and there are no constitutional symptoms. The peripheral blood may show a mild eosinophilia. X-ray examination of the involved area reveals an irregular destructive area of decreased density within the medullary substance and often involving the bone cortex with little or no evidence of osteogenic activity. Such lesions are solitary or multiple. It is hoped that future cases will have benefit of sternal marrow biopsy.

#### CONCLUSIONS

Eosinophilic granuloma of bone is described as an osseous reticulo-endotheliosis, and is considered as the most benign form of a basic disease-process which includes the acute Letterer-Siwe's

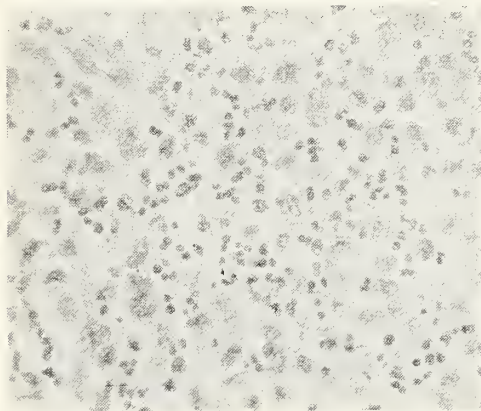


Fig. 3. Microscopic section of the tumor reported in this case showing the large histiocytes, eosinophilic granulocytes, and neutrophilic leukocytes. Stained H. & E. Magnification—420 times.

disease, and the more chronic Hand-Schüller-Christian's disease. While the presence of a local painful tumor of bone and the x-ray finding of



Fig. 2. Postoperative lateral roentgenogram of the skull which shows a tantalum prosthesis in place over the operative defect.

a destructive lesion in the absence of constitutional symptoms is presumptive evidence (and was sufficient to make a preoperative diagnosis in the present case), exact diagnosis depends upon microscopic verification of the surgical specimen.

A case of eosinophilic granuloma of the skull is described in which a tantalum prosthesis was fitted into the resulting skull defect at the time of the primary operation.

Treatment consists of surgical excision followed by radiation. The prognosis is uniformly good although transitional forms with multiple bony lesions and characteristics of Hand-Schüller-Christian's disease have the graver prognosis of the latter condition.

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#### CLINICOPATHOLOGIC CONFERENCE

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#### HISTORY

The patient, a 47 year old white male, was first seen in the out-patient clinic of the hospital in August, 1941, for an examination for WPA. At that time he gave a history of having had diabetes for nine years and having taken 20 units of protamine insulin daily for the past four or five years. The physical examination was essentially negative except for a blood pressure of 180/90. There was a note that there was no reason for this man not to continue his present work as a clerk.

The patient was next seen in the admitting room of the hospital on Feb. 20, 1946, with the complaint of having vomited blood. He gave a history of having been awakened from a sound sleep by a feeling of nausea. He went to the bathroom and vomited a large quantity of dark



red blood, some of which was clotted. The past history revealed that the patient had not been feeling well for several months and that his wife had noticed that his skin was a dark yellow in color. He had been seen by a physician who had prescribed liver and iron. The physical examination revealed a well nourished white male of 47 years who was not apprehensive or sweating. There was a marked jaundice of the skin and sclera. The blood pressure was 170/80. There were no masses or tenderness in the abdomen. He was immediately admitted to the medical service with the diagnosis of gastric hemorrhage and diabetes.

#### CLINICAL COURSE

The admission temperature, pulse, and respirations were 96, 72, and 20. At 6 a. m. his blood pressure was 140/60 and the pulse rate was 72. At 11:30 a. m. he was given 1000 cc. of 5 per cent glucose in water. At 1:30 p. m. he vomited approximately 300 cc. of bright red blood, and his blood pressure dropped to 80/62. One unit of plasma was started immediately, and then 500 cc. of whole blood was given. At 5:30 p. m. another 500 cc. of whole blood was given. His blood pressure rose to 132/58. At 7 a. m. the following morning his condition was reported as critical though he had had a fairly good night. At 1 p. m. he was given 1000 cc. of normal saline and at 6 p. m. another 200 cc. of whole blood was started. The prognosis was grave. He expired at 7:15 p. m.

The laboratory procedures gave the following results: red blood cell count, 3,480,000; white blood cell count, 9,100; hemoglobin value, 11 grams. The urea nitrogen was 71, and the Van den Berg gave an indirect value of 1.3 in thirty minutes. The blood chlorides were 396 mg. and the CO<sub>2</sub> combining power was 69 volumes per cent.

#### EXTRACT OF THE NECROPSY PROTOCOL

The body was that of a fairly well developed, moderately well-nourished white male. The mucous membranes were very pale, and the skin had a mild icteric tinge.

*Thoracic Cavity:* There were no adhesions in the pleural spaces. Each lung weighed 450 grams and on section displayed no pathology. The heart weighed 400 grams and on section through the left ventricle, there was extensive infarction, light to dark gray in color, with the central portion appearing somewhat necrotic.

*Abdominal Cavity:* The stomach contents were approximately 300 cc. of dark red clotted blood and some blood that had been digested. There was present a mild hemorrhagic gastritis. At the

lower end of the esophagus just above the cardia there was a small ulceration in the mucosa, approximately 3 mm. in area. At the center of this ulceration there was a vein which had ruptured. A probe 1 mm. in diameter entered the vein easily.

The liver weighed 1700 grams and was light tan in color, very firm, and the capsule was wrinkled. On section, the cut surface was almost uniformly yellow in color except for a few scattered areas of light brownish red. The cut surface appeared to consist almost entirely of connective tissue. The pancreas showed a moderate amount of fibrosis and was approximately one-third normal size. Each kidney weighed 75 grams. On section, the capsule stripped with moderate difficulty, leaving a coarsely granular surface. The cortex was narrowed to approximately 1 to 2 mm. in thickness and had been replaced by fibrous tissue.

*Microscopic Examination:* The sections of the liver showed that there had been a marked increase in the connective tissue in the portal areas. The liver cells surrounding these areas showed a moderate amount of necrosis. Practically all of the vessels showed a marked sclerosis. There were a few areas that showed a round cell infiltration. There was no fatty infiltration in the liver cells. The sections of spleen showed a marked fibrosis and that there were no normal splenic elements left. There was a great increase in the red blood cells in the pulp. The vessels showed the same amount of sclerosis as those of the liver. The sections of the kidney showed the characteristic picture of a nephrosclerosis. There was a thickening of the capsules of the glomeruli, but there were no crescents. All of the walls of the vessels showed the same sclerosis as that described in the other sections. The sections of the pancreas showed that much of the glandular elements had been replaced by fibrous tissue. Many of the islets were necrotic, but this was probably the result of post-mortem change.

*Comment and Summary:* This case is not described because of the arterio-sclerosis that was present, because that is too common a finding in diabetics. Rather, it is presented because of the presence of a portal cirrhosis of the liver in a diabetic. Nowhere in the history of this patient was there any suggestion of imbibition of alcohol that is supposed to play such an important part in the etiology of portal cirrhosis. There was brought out in the history the fact that the diet had been for a long time rather restricted in an attempt to control the diabetes. In view of the recent work which indicates that the liver may

# STATE DEPARTMENT OF HEALTH

*Walter Biering*

## ANNUAL MEETING, IOWA PUBLIC HEALTH ASSOCIATION

The nineteenth annual meeting of the Iowa Public Health Association will be held on Thursday and Friday, Sept. 26 and 27, 1946, at Hotel Fort Des Moines in Des Moines. Physicians are cordially invited to attend the various sessions.

The coming meeting will be the first of the postwar period. Subjects were selected by the program committee which will be of special interest to attending physicians, local health directors, public health and visiting nurses, public health engineers and others concerned with community health.

A number of guest speakers from outside the state will participate in the program. Robert H. Flinn, M.D., Senior Surgeon, United States Public Health Service, will be the speaker at the noon luncheon session on Friday. Dr. Flinn was a member of the Medical Division, United States Strategic Bombing Survey, assigned to Japan; his subject will be, "Effects of Bombing Warfare on Public Health." Gaylord Anderson, M.D., Professor Hygiene and Preventive Medicine, University of Minnesota, will speak on "Wartime Advances in Preventive Medicine Applicable to Civilian Life" with special reference to infections caused by the hemolytic streptococcus. In a symposium on Friday morning Louis Schwartz, M.D., Washington, D. C., Medical Director, Chief Office of Dermatology, United States Public Health Service, will discuss modern advances in the treatment of epidemic ringworm of the scalp.

Those attending the dinner meeting on Thursday night will hear an address on the subject, "Atomic Energy," by R. E. Rundle, Ph.D., Ames, Professor of Physical Chemistry, Iowa State College.

Participants at a panel discussion to be held on Friday afternoon will be members of the Association (sanitary engineers, medical directors and public health nurses) who served with the armed forces in World War II. Discussion will be on the theme, "Observations of Public Health Workers in War Areas," under direction of Reginald

M. Atwater, M.D., New York, Executive Secretary, American Public Health Association.

Other subjects will have to do with DDT, Nutrition, Rabies in Iowa, Malaria and Tropical Diseases, Industrial Hygiene, Local Health Organization, Progress in Public Health in Iowa During the Past 66 Years, Cancer, and Typhoid Fever.

The tentative program follows:

### Tentative Program Nineteenth Annual Meeting of the Iowa Public Health Association

At Hotel Fort Des Moines, Des Moines, Iowa  
September 26-27, 1946

Thursday, September 26

#### Morning Session

Presiding, Paul Houser, President Iowa Public Health Association

- 8:30 Registration.
- 9:30 Welcome, Honorable John MacVicar, Mayor of Des Moines.  
Response, Walter L. Biering, M.D., State Commissioner of Health.
- 9:40 DDT Goes to Work in Iowa, Richard Bond, Des Moines, Assistant State Sanitary Engineer, Iowa State Department of Health.
- 10:10 Observations on Nutrition in War Time and Present Needs, Miss Florence W. Unash, Nutritionist, Iowa State Department of Health.
- 10:40 Rabies in Iowa, I. H. Borts, M.D., Iowa City, Director State Hygienic Laboratory.  
Discussion.
- 11:20 The Struggle Against Malaria and Tropical Disease, M. E. Barnes, M.D., Iowa City, Professor Hygiene and Preventive Medicine, University of Iowa.  
Discussion.  
Noon recess.

#### Afternoon Session

Presiding, Erwin C. Sage, M.D., Medical Director District Health Service No. 9, Burlington, Iowa

- 1:30 Moving Picture Film on Industrial Hygiene, "The Story of Dr. Randall."
- 2:00 A Medical Director Looks at Community Health Needs, M. T. Johnson, M.D., Fort Dodge, Medical Director, District Health Service No. 5.  
Discussion.



- 2:30 Iowa's Need for Adequate Local Health Organization, Dr. C. L. Putnam, M.D., Des Moines, Director Local Health Services, Iowa State Department of Health.
- 3:00 Survey of Local Health Facilities, Mrs. E. J. Hines, Leon, Iowa.
- 3:45 Wartime Advances in Preventive Medicine Applicable to Civilian Life, Gaylord Anderson, M.D., Minneapolis, Minn., Professor of Hygiene and Preventive Medicine, University of Minnesota.

Dinner Meeting

Paul Houser, Toastmaster

- 6:30 Introduction of guests.  
Sixty-six Years of Progress in Public Health in Iowa, Dr. Walter L. Bierring, M.D.  
Atomic Energy, R. E. Rundle, Ph.D., Ames, Iowa, Professor, Physical Chemistry, Iowa State College.

Friday, September 27

Morning Session

Presiding, Dr. C. L. Putnam, M.D., Des Moines

- 9:30 Ringworm of the Scalp—Symposium.  
Observations on an Epidemic of Ringworm of the Scalp, Robert E. Jameson, M.D., Davenport.  
Diagnosis and Newer Methods of Treatment, Louis Schwartz, M.D., Washington, D. C., Medical Director, Chief, Office of Dermatology, United States Public Health Service.  
The Nurse's Part in Management of Ringworm, Bertha Harvey, R.N., Davenport, Director Visiting Nurses Association.  
Discussion, James Young, M.D., Des Moines.
- 10:30 Experiences with Typhoid Fever, Miss Martha Ronayne, R.N., Advisory Nurse, State Department of Health.
- 11:00 Role of the Public Health Nurse in Control of Typhoid Fever, Miss Olive Johnson, R.N., Advisory Nurse, District Health Service No. 11, Council Bluffs.

- 11:30 Statewide Cancer Control, E. G. Zimmerer, M.D., Director Cancer Control, State Department of Health.

Noon Luncheon Meeting

Presiding, Walter L. Bierring, M.D.  
Address: Effects of Bombing Warfare on Public Health, Robert H. Flinn, M.D., Washington, D. C., Senior Surgeon, United States Public Health Service.

Friday Afternoon—2:00 O'clock

Presiding, Dr. Reginald M. Atwater, M.D., Executive Secretary, American Public Health Association

Panel Discussion: Observations in War Areas Pertaining to Public Health, Dr. Atwater, M.D., Interlocutor.  
Participants: Sanitary Engineers, Medical Directors and Public Health Nurses.  
Business Meeting.

POLIOMYELITIS

Prevalence of Poliomyelitis

As shown in the table which follows, undue prevalence of poliomyelitis developed very early in 1946. (See July number of the JOURNAL, page 297.) It is probable that the eight cases which were reported in January brought to a close the season which began in May and June of 1945, during which year three hundred and twenty cases were notified to the Iowa State Department of Health.

POLIOMYELITIS IN IOWA

Reports by months for 1946 (through Aug. 17), 1945, 1940 and the expected number of cases based on a nine-year average (1935-1943)

Month	1946	Normal or Expected Number (1935-1943)	1945	1940
January	8	2	0	12
February	1	2	2	7
March	0	1	0	1
April	2	1	0	1
May	8	1	1	2
June	8	0	2	5
July	45	4	6	21
August	209 (thru Aug. 17)	13	68	174
September		23	92	421
October		30	101	242
November		9	42	32
December		3	6	11
Totals	209 (thru Aug. 17)	89	320	929

The second column in the above table indicates the number of cases of poliomyelitis expected to be reported from month to month in a year of normal prevalence; the figures are an average for the 9-year period 1935-1943. It will be seen that with eight cases in May, eight in June, forty-five in July and two hundred and nine (through Aug. 17), reported cases during these months greatly exceeded the expected number.

MORBIDITY REPORT

Disease	July '46	June '46	July '45	Most Cases Reported From
Diphtheria	14	16	4	Muscatine, Cerro Gordo, Scott
Scarlet Fever	41	68	46	Polk, Clarke, Des Moines
Typhoid Fever	0	0	0	.....
Smallpox	2	1	1	Benton, Polk
Measles	189	644	85	Black Hawk, Linn, Boone
Whooping Cough	116	152	37	Dubuque, Polk, Clinton
Brucellosis	50	95	19	Dickinson, Chickasaw, Poweshiek
Chickenpox	38	138	40	Dubuque, Cerro Gordo, Clinton
German Measles	1	0	3	Des Moines
Influenza	0	0	0	.....
Malaria	17	19	26	Polk, Butler, Delaware
Meningococcus Meningitis	6	6	1	Appanoose, Black Hawk, Boone
Mumps	77	143	115	Linn, Delaware, Des Moines
Pneumonia	7	6	*854	Polk, Scott
Poliomyelitis	45	8	6	Polk, Clinton, Woodbury
Tuberculosis		53	61	For the State
Gonorrhea	156	181	211	For the State
Syphilis	132	139	102	For the State

\*Delayed reports from Iowa hospitals covering first 26 weeks '45.

# The JOURNAL of the Iowa State Medical Society

ISSUED MONTHLY

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## IS YOUR CHILD READY FOR SCHOOL?

Shortly after the Parent-Teacher Association was founded in 1912, a pre-school examination of each child was strongly advocated. Since the inception of this program, however, there have been many obstacles encountered. The ideal situation would consist in a thorough examination of the pre-school child by his own family physician plus a mental evaluation by a qualified examiner. Immediately it becomes apparent that fully one-half of the enrollees do not have a family physician: sheer lethargy of some parents and sheer ignorance of the value of a mental and physical evaluation on the part of other parents would prevent competent examination of many of the children who do have a family physician. Mass examinations of this type also present inherent obstacles due to lack of a scientific yardstick predicated upon individual differences in standards among physicians. However, unless mass examination is attempted, the program suffers greatly.

It is inescapable that sound physical and mental health are essential prerequisites to scholastic progress of the individual pupil. In addition to sound heart, lungs, bony framework, and nutrition, normal sight and hearing are essential. It may be said that the child entering school is upon the threshold of the real business of life. If this child is not mentally developed, he is certainly not ready to start school. He must have a reading readiness, for otherwise a sense of frustration follows inability to read and the child is then exposed to the stigma of failure. Likewise, num-

ber sense and muscle coordination are factors which should be evaluated by the mental hygienist. The child who is self-sufficient in his eating, toilet, dressing, and playing habits is sufficiently adjusted socially to make a success of his first year of school. However, the overprotected child is likely to be exposed to social problems which will prove difficult, and he is apt to develop traits of maladjustment which will persist throughout his school life.

There has been a recent trend among pediatricians to pay increased attention to booster shots for tetanus, whooping cough, diphtheria, and smallpox for the pre-school child. A Schick test, for instance, has a definite limit of time value while a booster shot will afford protection over a longer period of time. It has been noted that diphtheria has been appearing more frequently in older children, which indicates booster shots would do much to limit this disease. All too frequently an immunization program has consisted in the usual immunizations during the first year of life followed by masterful neglect.

Although educators have become disappointed with the progress made in the pre-school examination of the child, that is no reason for physicians to be lax in their support of the program. As beneficiaries as well as physicians under the plan, let us willingly and wholeheartedly cooperate in the building of a sounder and healthier nation by giving to each child the opportunity to begin his school life at a time when he is physically and mentally equipped.

## USE OF DDT

An interesting experiment in the use of DDT for the eradication of flies and other insects has been carried out in Des Moines this summer. The experiment was performed by H. E. Ransom, M.D., Commissioner of Health, with the cooperation of the United States Public Health Service and the State Department of Health. Five hundred gallons of DDT concentrate were used from which two thousand gallons of spray were made.

Two hundred and forty sheets of fly paper were placed in thirty different areas in the city in order to obtain some idea of the fly population in the areas to be sprayed. Four sheets of fly paper were placed around each of the outside toilets to be sprayed the day before the spraying and again three to five days after spraying. These papers were put on at 9 a. m. and taken down at 5 p. m., the same hours being used before and after spraying. In one test, ninety-six flies were caught before spraying and only seven flies after-



ward. The smallest catch for one toilet before spraying was eighteen, and none was caught there after spraying. In every instance there was a marked reduction in the fly population in the areas where DDT was used. In addition to the fly paper test, a sanitary inspector interviewed two hundred and thirty-six persons in the areas sprayed. Two hundred and thirty-two persons were high in their praise of this program and said that there were "a lot fewer flies after spraying than before." Four persons said they "did not have flies before or after and did not think that DDT did much good." These interviews were made from two to four weeks after spraying.

The number and kinds of units sprayed were: Outside toilets, 4,017; animal pens, 863; garbage cans, 1,759; loose garbage, 986; sheds and back porches, 840. The cost of spraying each unit was approximately ten and one-tenth cents per unit.

Physicians in Iowa who were members of the armed services are well acquainted with the effect of DDT in eradicating flies and other insects. Though the use of this spray for cockroaches has provided equivocal results, in one Des Moines dairy where a germicide expert had been employed to spray the entire plant every month, an experimental spraying was carried out utilizing a ten per cent solution of DDT and plain water. Following this spraying, all cockroaches disappeared from the elevator shaft, basement, sewer intakes, floors, walls, and ceilings. Because of the success of the venture, the dairy has decided to use this spray themselves at whatever interval may be necessary to kill any existing cockroaches and to prevent their propagation.

The use of this spray is also recommended for use in schools, especially about the lunchroom and showers, and other public buildings where mingling with crowds affords opportunity for rapid spread of any contagious disease.

It is interesting to note that the history of this drug dates back to 1784 when Otto Ziedler, a German chemist, first synthesized DDT (Dichlorodiphenyl-trichloroethane). About 1940 Paul Muller, research chemist for J. R. Geigy, S.A., Basle, Switzerland, re-synthesized this compound and reported its insecticidal action on flies and some other insects. Since that time the drug has been found effective in the control of the malaria-carrying mosquito; the body louse, which is the vector of typhus; mites, which are the vectors of scrub typhus; and also flies, head lice, crab-lice, bedbugs, fleas, ticks, and cockroaches.

It is doubtful that anyone who has experienced the benefit of DDT would question the fact that

its use as a public health measure is a valuable adjunct in the war against insects, both from a nuisance standpoint and in the spread of disease.

#### PRESENT STATUS OF THE VETERANS ADMINISTRATION PROGRAM IN IOWA

This editorial is presented to inform the medical profession in Iowa regarding progress made thus far in negotiating a contract with the Veterans Administration. The House of Delegates approved a contract and fee schedule which had been prepared by a committee appointed for this purpose and authorized the committee to negotiate a contract for home care of veterans for service-connected disabilities.

It is as much of a disappointment to the members of the committee as it is to the doctors and veterans of Iowa to have to report that no contract has been signed as yet. The original contract and fee schedule, which had been discussed with General Hawley in April, were submitted formally May 9.

Shortly after July 1 the central office received a letter from the Veterans Administration suggesting the advisability of having the Veterans Administration handle the administrative details rather than Iowa Medical Service. The reason given for the proposed change was that Iowa Medical Service was still in its formative period and might not be able to handle the great load of work entailed by the program.

The committee was advised of this letter, and the chairman met with the president of Iowa Medical Service and the president of the Iowa State Medical Society to discuss the matter. No decision was reached, however. All agreed it was too important a problem to decide hastily, and in all probability the Executive Council will be asked to meet and make the decision.

In the interim, however, the chairman of the committee wrote the Veterans Administration stating frankly that the Iowa State Medical Society could not give an answer on that change at once, but asking if the fee schedule might be considered while the decision was being made. (It had not been analyzed at the time the letter from the Veterans Administration was sent.)

A second letter from Washington indicated that the fee schedule is now being analyzed. Furthermore, and most encouraging, it is said that future negotiations on the contract should be carried on with Dr. Einar Andreassen in Minneapolis, which is the district headquarters for the Veterans Administration.

A letter has been written to Dr. Andreassen asking for an appointment to discuss the contract

with him, and it is the hope of the committee and State Society officials that by the time the next issue of the JOURNAL is published, the contract may be a reality.

#### THE FEDERAL LUNCH PROGRAM AS RELATED TO MALNUTRITION AND LEARNING ABILITY

The value of good nutrition for the proper physical development of children, a point which those in the medical profession have long stressed, was recognized and bolstered by Congress on June 18 through its passage of the Agriculture Appropriation Bill which included a contribution of \$75,000,000 for school lunches for needy children. At the same time, though much less mention has been made of this factor because of the relatively small body of data available, the remarkable interdependence of proper nutrition and learning capacity is likewise being recognized.

One of the most authentic studies of the effects of malnutrition on the mental activity to date, made by Dr. Ruth F. Harrell of Teachers College, Columbia University, involved the adding of thiamine to the diets of one hundred and twenty orphan children, sixty of whom were given tablets containing 2 mg. of thiamine per day for a period of one year, the other sixty receiving the same dosage the next year. Since the calculated thiamine intake per child each day was approximately 1.0 mg., the children given the additional 2.0 mg. per day received three times as much thiamine as their playmates. The results of standardized achievement and mental tests given to both groups during the first year found the thiamine-fed children superior in nearly every case. Following the elimination of the thiamine from the first group's diet, however, a reversal of abilities was experienced while the second group, then receiving thiamine, forged ahead of their partners. No adverse effect of withdrawal of thiamine was noted in intelligence tests, educational achievement, reaction time, and height and weight gains early in the year, however, which suggests that these characteristics change more slowly and permanently and that the effect of the thiamine held over for a part of the second year.

Since there is such great disparity in the learning abilities of children under slightly different dietary regimens, it might be well to point out some of the results obtained through observation of and improvement in diets of school children of Iowa. Cary School, Des Moines, which is designed for slow learning elementary pupils, for example, has attempted to improve the diets of the underprivileged populace through first, the surplus commodities lunch, and now,

the federally subsidized lunch program. Miss Mary L. Yates, principal of the school, states that during the past five years approximately one hundreds pupils have eaten the lunches daily. Miss Yates has noticed marked improvement in many respects, namely, increase in weight, interest in correct foods, better dispositions, better attendance (largely because of the elimination of the old gag, "I didn't have anything to give Johnny for lunch, so I didn't send him"), and emotional stability, all factors which have helped promote the group's scholastic achievement.

C. F. Schropp, former director of junior high schools in Des Moines, reported that at Woodrow Wilson Junior High School, the first secondary school in the city to adopt the federal lunch plan, there was at first criticism because of the lack of variety of foods served in the school cafeteria. Teachers found better study habits and fewer discipline problems their reward, however, for the improvement of the pupils' basic diet.

The type A or complete meal lunch consists of one-half pint of fresh, whole pasteurized milk; two ounces of meat or fish, one egg, or two ounces of cheese or other meat substitute; one cup of vegetables or fruit or one-half cup of each; one or more slices of bread or muffins or other hot bread made of whole grain or enriched flour or cereal; two teaspoons of butter or oleomargarine with added vitamins; and a simple dessert such as custard, fruit, or pudding. This basic lunch, whose actual cost approximates twenty-four cents, is served to pupils for fifteen cents, the balance being met by the Food Distribution Administration with the funds appropriated by Congress for this indemnification.

Where full meals have been an impossibility, the penny milk or type C plan has been a big factor in helping to improve the school children's nutrition. In 1944 approximately four million, four hundred and forty-five thousand children were receiving lunches or milk paid for in part by the Food Distribution Administration. (Of these, 12 per cent were served free meals, 4 per cent served at less than prevailing charge, and only 32 per cent were served milk only.) Adding to this the thirty thousand schools which provided school lunches for about four million students without participating in the federal program, the totals for 1944 were some sixty thousand schools and over eight million children who participated.

That a great many people throughout the nation suffer from malnutrition, making the lunch program a vital factor in their health, has been proved through studies such as were conducted in 1944 under the auspices of the International



Health Division of the Rockefeller Foundation, New York City. Taking a rural population in middle Tennessee, it was found that the vitamin A dietary intake of the group in question was deficient in a large number, ranging from 34 per cent in the one to three age group to 68 per cent in the boys and girls thirteen to fifteen among the white subjects, and from 35 per cent in children from four to six to 71 per cent in boys and girls thirteen to fifteen in the colored race. This relatively large amount of vitamin A deficiency was indicated by the dietary intake records, the adaptometer test, and the vitamin A level of the blood.

Thus the recent federal lunch appropriation comes at a time when it can provide funds for the new school year and food for the mental as well as the physical growth of the youngsters. The American taxpayer will find his dollar of far greater value when it is used to provide for the welfare of a child's stomach as well as his mind, thus making both procedures of some avail.

#### CONVENTION OF THE ASSOCIATION OF MILITARY SURGEONS

All physicians, surgeons, dentists, veterinarians and nurses as well as medical administrators are invited to the Convention of the Association of Military Surgeons of the United States, to be held in Detroit, Mich., October 9 to 11 inclusive. There is no registration fee. All interested parties are urged to send in their reservations at once to Col. Burt R. Shurly, Chairman, Hotels Committee, 1005 Stroh Building, Detroit 26, Mich.

The Convention committee announces that final program arrangements have been completed. In addition to the previously announced schedule of meetings, banquets, luncheons, symposia, etc., the Convention will feature a total of 25 panel discussions relative to the various activities of the Military Surgeons. Subjects to be covered include anaesthesia, aviation medicine, dentistry, eye, ear, nose and throat, medicine, fractures, nurses (Army and Navy), plastic surgery, thoro-abdominal surgery, public health, medical administration, veterinary surgery, and wounds and wound healing.

The panel discussions will be held in special meeting rooms at the Statler and Book Cadillac Hotels. The schedule is arranged to provide those present the opportunity of attending. Subjects have been staggered to provide all interested professional men the opportunity of attending the panels they are individually interested in.

Extensive radio coverage will be accorded the Convention through various spot broadcasts and forums. On the Sunday previous to the opening of the Convention, several Association members will participate in a round table discussion broadcast over one of the most powerful stations in the mid-west.

#### SPEAKERS BUREAU ACTIVITIES

The Bureau, after being somewhat restricted for the past few years, is pleased to announce the resumption of its postgraduate activities. Beginning September 19, a series of five educational lectures will be sponsored by the Carroll County Medical Society. Physicians in the counties surrounding Carroll are cordially invited to attend these meetings for which there will be a nominal charge of ten dollars for the entire course or two dollars per lecture. Dinner will be served at the St. Anthony Hospital in Carroll at 6:30 p. m., followed by the lecture at 8:00 p. m. Doctors who plan to be present for the dinner should make reservations with John R. Morrison, M.D., of Carroll, at least twenty-four hours prior to each meeting.

We urge all physicians in the vicinity of Carroll to attend these worthwhile lectures and believe every doctor will welcome the opportunity to hear such outstanding specialists discuss problems frequently encountered by general practitioners.

Sept. 19 Office Treatment of Rectal Problems

Louis E. Moon, M.D., Omaha, Nebraska

Oct. 3 The Management of Heart Failure

Thomas J. Dry, M.D., Rochester, Minnesota

Oct. 17 Office Gynecologic Procedures

Willis E. Brown, M.D., Iowa City, Iowa

Nov. 14 Acute Surgical Conditions of the Abdomen

R. Russell Best, M.D., Omaha, Nebraska

Nov. 21 Pneumonias, With Special Reference to the Atypical Forms

Howard A. Lindberg, M.D., Chicago, Illinois

#### SPEAKERS BUREAU RADIO SCHEDULE

WOI—Wednesdays at 2:45 p. m.

WSUI—Wednesdays at 3:00 p. m.

September 4 The Common Cold

Marshall D. Huston, M.D.

September 11 Heredity Lee E. Rosebrook, M.D.

September 18 Hobbies for Health

Donald L. Cross, M.D.

September 25 Tumors Edwin M. Limbert, M.D.

#### CLINICOPATHOLOGIC CONFERENCE

(Continued from page 401)

play an important role in diabetes, there may be some connection between the two diseases.

There are several interesting features of the case which bear comment. Usually in a moderately well advanced cirrhosis, there is an ascites. In this case no ascites was found, and yet there was sufficient interference with the portal circulation to have esophageal varices with rupture. Secondly, there was no history of cardiac disease, and yet there was a large infarct in the left myocardium.

The terminal disease is one of the most frequent complications of a portal cirrhosis of the liver.

# Roster of Iowa Physicians in Military Service

As of August 19, 1946

## Appanoose County

Condon, F. J., Centerville (Owensboro, Ky.)...Major, U.S.P.H.S.

## Benton County

Senfeld, Sidney, Belle Plaine

## Black Hawk County

Marquis, F. M., Waterloo (Ft. Sam Houston, Tex.)...Capt., A.U.S.

## Boone County

Brewster, E. S., Boone (APO 254, New York, N. Y.)...Major, A.U.S.

## Buena Vista County

Witte, H. J., Marathon (APO 350, New York, N. Y.)...Major, A.U.S.

## Butler County

James, R. A., Allison (Mare Island, Cal.)

## Carroll County

Freedland, Maurice, Coon Rapids

## Cass County

Schiff, Joseph, Anita (Walla Walla, Wash.)...Capt., A.U.S.

## Cerro Gordo County

Fitzpatrick, M. R., Mason City (Ft. Dix, N. J.)...1st Lt., A.U.S.  
 †Harrison, G. E., Mason City...Col., A.U.S.  
 Mullen, L. M., Mason City (Kansas City, Mo.)...Capt., A.U.S.  
 Tice, G. I., Mason City (Mare Island, Cal.)...Lt., U.S.N.R.  
 Tice, W. A., Mason City (Jacksonville, Fla.)...Lt. (jg), U.S.N.R.

## Cherokee County

George, L. A., Cherokee...A.U.S.

## Clayton County

Glesne, O. G., Monona (Knoxville, Iowa)...Capt., A.U.S.

## Dallas-Guthrie Counties

Byrnes, A. W., Guthrie Center (Fort Custer, Mich.)...Major, A.U.S.

## Delaware County

Baumgarten, Oscar, Earlville...Capt., A.U.S.

## Des Moines County

Eigenfeld, M. L., Burlington (Cleveland, Ohio)...1st Lt., A.U.S.

## Dubuque County

Anderson, E. E., Dubuque (Bradley Field, Conn.)...Capt., A.U.S.  
 Cunningham, J. C., Dubuque (Fairfield, Ohio)...Capt., A.U.S.  
 Edstrom, Henry, Dubuque (Galesburg, Ill.)...Lt. Col., A.U.S.  
 †Hall, C. B., Dubuque...Capt., A.U.S.  
 Knoll, A. H., Dubuque (San Francisco, Cal.)...Major, A.U.S.  
 Lavery, H. B., Dubuque (Washington, D. C.)...Lt. Col., A.U.S.  
 Leik, D. W., Dubuque (Wichita Falls, Tex.)...Capt., A.U.S.  
 Mueller, J. J., Dubuque...Capt., A.U.S.  
 Painter, R. C., Dubuque (Cheyenne, Wyo.)...Lt. Comdr., U.S.N.R.

## Fayette County

Walsh, E. L., Hawkeye (Huntington, W. Va.)...A.U.S.  
 Walsh, W. E., Hawkeye (Cleveland, Ohio)...Comdr., U.S.N.R.

## Floyd County

Huber, R. H., Charles City...1st Lt., A.U.S.  
 Magdick, Carl, Charles City (Green Cove Springs, Fla.)...Lt., U.S.N.R.

## Franklin County

Hedgecock, L. E., Hampton (Camp Lejeune, N. Car.)...Comdr., U.S.N.R.

## Hamilton County

Mooney, F. P., Jewell...Capt., A.U.S.  
 Schrader, M. A., Webster City (Topeka, Kan.)...1st Lt., A.U.S.

## Henry County

Cogan, Samuel, Mt. Pleasant  
 Dwankowski, Carl, Mt. Pleasant (Chicago, Ill.)...Major, A.U.S.  
 Ristine, L. P., Mt. Pleasant (Denver, Colo.)...Major, A.U.S.

## Iowa County

Geiger, U. S., North English (Kansas City, Mo.)...Lt. Comdr., U.S.N.R.

## Jackson County

Skelley, P. B., Jr., Maquoketa (APO 247, San Francisco, Cal.)...1st Lt., A.U.S.

## Jefferson County

Frey, Harry, Fairfield (Norfolk, Va.)...Comdr., U.S.N.R.  
 Graber, H. E., Fairfield...Lt. Col., A.U.S.  
 Taylor, I. C., Fairfield (Washington, D. C.)...1st Lt., A.U.S.

## Johnson County

Albert, S. M., Iowa City...Capt., A.U.S.  
 Cobb, E. A., Iowa City (Ft. Sam Houston, Texas)...1st Lt., A.U.S.  
 Crowell, E. A., Iowa City (Ft. Geo. Wright, Wash.)...Capt., A.U.S.  
 Evers, L. B., Iowa City...1st Lt., A.U.S.  
 Flax, Ellis, Iowa City...1st Lt., A.U.S.  
 Francis, N. L., Iowa City (Annapolis, Md.)...Lt. (jg), U.S.N.R.  
 Harness, W. M., Iowa City (Hot Springs, Ark.)...A.U.S.  
 Hartung, Walter, Iowa City (Springfield, Mo.)...Major, A.U.S.  
 Hessin, A. L., Iowa City (APO 469, New York, N. Y.)...Major, A.U.S.  
 Keislar, H. D., Iowa City (Washington, D. C.)...Capt., A.U.S.  
 Laubscher, J. H., Iowa City (Ft. Benning, Ga.)...1st Lt., A.U.S.  
 Moreland, F. B., Iowa City (Maxwell Field, Ala.)...1st Lt., A.U.S.  
 Petersen, R. E., Iowa City (Manchester, N. H.)...1st Lt., A.U.S.  
 Ringrose, E. J., Iowa City  
 Sells, R. L., Jr., Iowa City (Palmdale, Cal.)...Capt., A.U.S.  
 Spellman, George G., Iowa City (Tacoma, Wash.)...Lt., A.U.S.  
 †Springer, E. W., Iowa City (APO 678, New York, N. Y.)...Capt., A.U.S.  
 Stump, R. B., Iowa City (Denver, Colo.)...Capt., A.U.S.  
 Titus, E. L., Iowa City (Los Angeles, Cal.)...Col., A.U.S.  
 Trapasso, T. J., Iowa City (APO 520, New York, N. Y.)...Capt., A.U.S.  
 Vander Laan, C. A., Iowa City...A.U.S.  
 Voelker, C. A., Jr., Iowa City...Capt., A.U.S.  
 Weatherly, H. E., Iowa City...Major, A.U.S.  
 Weih, J. E., Iowa City...A.U.S.  
 Wollmann, W. W., Iowa City (Martinsburg, W. Va.)...Capt., A.U.S.

## Junior Members

†Adams, M. P., Iowa City (Fleet PO, San Francisco, Cal.)...Lt. (jg), U.S.N.R.  
 Ahrens, J. H., Iowa City (APO San Francisco, Cal.)...A.U.S.  
 Ball, A. L., Iowa City (Camp Polk, La.)...Major, A.U.S.  
 Barrent, M. E., Iowa City (Camp Tyson, Tenn.)...Capt., A.U.S.  
 Blair, J. D., Iowa City (APO San Francisco, Cal.)...Major, A.U.S.  
 Boyd, R. J., Iowa City (Spokane, Wash.)...Capt., A.U.S.  
 Brintnall, E. S., Iowa City (APO New York, N. Y.)...Major, A.U.S.  
 Burr, S. P., Iowa City (APO San Francisco, Cal.)...1st Lt., A.U.S.  
 Couch, O. A., Iowa City (Camp Van Dorn, Miss.)...1st Lt., A.U.S.  
 Freiberg, M., Iowa City (Jefferson Barracks, Mo.)...A.U.S.  
 Hamilton, H. E., Iowa City (Chicago, Ill.)...1st Lt., A.U.S.  
 Hendricks, A. B., Iowa City (Fleet PO, San Francisco, Cal.)...Lt. Comdr., U.S.N.R.  
 Hovis, Wm., Iowa City (Fleet PO, San Francisco, Cal.)...Lt. (jg), U.S.N.R.  
 Kaplan, Nathan, Iowa City (Carlisle Barracks, Pa.)...1st Lt., A.U.S.  
 Keil, P. G., Iowa City (Sioux City, Iowa)...1st Lt., A.U.S.  
 McCann, J. P., Iowa City (Carlisle Barracks, Penn.)...1st Lt., A.U.S.  
 Moen, B. H., Iowa City (APO 755, New York, N. Y.)...Capt., A.U.S.  
 Phillips, R. M., Iowa City (San Francisco, Cal.)...1st Lt., A.U.S.  
 Randall, R. G., Iowa City (Waterloo, Iowa)...Capt., A.U.S.  
 Rosenbusch, M., Iowa City (Fort Leonard Wood, Mo.)...1st Lt., A.U.S.  
 Russin, L. A., Iowa City (Fort Blanding, Fla.)...Capt., A.U.S.  
 Sawtelle, W. W., Iowa City...Lt., U.S.N.R.  
 Shand, J. A., Iowa City (Carlisle Barracks, Penn.)...1st Lt., A.U.S.  
 Shapiro, S. I., Iowa City  
 Skewis, J. E., Iowa City (Corona, Cal.)...Lt. Comdr., U.S.N.R.  
 Watters, V. G., Iowa City (Fort Leonard Wood, Mo.)...1st Lt., A.U.S.  
 Wicks, W. J., Iowa City (Camp Crowder, Mo.)...Capt., A.U.S.  
 Williams, L. A., Iowa City (Treasure Island, Cal.)...1st Lt., A.U.S.  
 Yetter, W. L., Iowa City (APO New York, N. Y.)...Major, A.U.S.  
 †Zahrt, N. E., Iowa City (APO San Francisco, Cal.)...Capt., A.U.S.  
 Zimmerman, H. A., Iowa City (Santa Ana, Cal.)...1st Lt., A.U.S.

## Keokuk County

Engelmann, A. T., What Cheer (Camp Polk, La.)...Capt., A.U.S.

## Kossuth County

Corbin, R. L., Luverne (Des Moines, Iowa)...Capt., A.U.S.

## Lee County

Younan, Thomas, Ft. Madison...Capt., A.U.S.

## Linn County

Coughlan, V. H., Coggon (Fort Snelling, Minn.)...A.U.S.  
 Leedham, C. L., Springfield (Hot Springs, Ark.)...Col., A.U.S.  
 †MacDougal, R. F., Cedar Rapids (APO 9057, New York, N. Y.)...Capt., A.U.S.  
 Noble, W. C., Cedar Rapids (Camp San Luis Obispo, Cal.)...1st Lt., A.U.S.  
 Smrha, J. A., Cedar Rapids (Denver, Colo.)...Capt., A.U.S.  
 Yavorsky, W. D., Cedar Rapids (Fleet PO, San Francisco, Cal.)...Comdr., U.S.N.R.

## Lyon County

Morlarity, F. J., Rock Rapids (Corvallis, Ore.)...Capt., A.U.S.



**Mahaska County**

Gillett, R. M., Oskaloosa (Fleet PO, San Francisco, Cal.).....Capt. U.S.N.

**Marion County**

Gray, J. F., Jr., Melcher.....Capt., A.U.S.

**Mills County**

Kuitert, J. H., Glenwood (Denver, Colo.).....Major, A.U.S.

**Mitchell County**

Owen, W. E., Osage (San Diego, Cal.).....Lt., U.S.N.

**Monona County**

†Harlan, M. E., Onawa (Fleet PO, San Francisco, Cal.).....Lt. (jg), U.S.N.R

**Monroe County**

Bay, F. N., Albia.....Lt. Comdr., U.S.N.R.

Gilliland, C. H., Albia (Fleet PO, San Francisco, Cal.).....Lt. Comdr., U.S.N.

Morrissey, W. J., Lovilia (Tacoma, Wash.).....1st Lt., A.U.S.

**Muscatine County**

Kimball, J. E., Jr., West Liberty.....Major, A.U.S.

Norem, Walter, Muscatine (APO, Miami, Fla.).....Capt., A.U.S.

**Page County**

Bauer, Frank, Shenandoah (APO New York, N. Y.).....A.U.S.

Brush, Frederick, Shenandoah (APO New York, N. Y.).....A.U.S.

Schwidde, Tilford, Shenandoah (APO New York, N. Y.).....A.U.S.

**Polk County**

Bender, H. R., Des Moines (Carlisle Barracks, Penn.).....1st Lt., A.U.S.

Bruner, J. M., Des Moines.....Lt. Col., A.U.S.

Ervin, L. J., Des Moines.....Lt. Col., A.U.S.

Fleck, W. L., Des Moines (Ft. Howard, Md.).....Lt. Col., A.U.S.

Fried, David, Des Moines (Carlisle Barracks, Penn.).....1st Lt., A.U.S.

Fracasse, John, Des Moines.....1st Lt., A.U.S.

Gerchek, E. W., Des Moines.....U.S.P.H.S.

Harris, H. L., Des Moines (Salina, Kan.).....Capt., A.U.S.

Levin, S. L., Des Moines (Des Moines, Iowa).....Major, A.U.S.

Maguire, L. M., Des Moines (Des Moines, Iowa).....Col., A.U.S.

Maloney, P. J., Des Moines.....Capt., A.U.S.

Martin, L. E., Des Moines (Helena, Ark.).....1st Lt., A.U.S.

Mencher, E. W., Des Moines.....1st Lt., A.U.S.

Montgomery, S. A., Des Moines (Carlisle Barracks, Pa.).....Capt., A.U.S.

†Morden, R. P., Des Moines (APO 635, New York, N. Y.).....Capt., A.U.S.

Mumma, C. S., Des Moines (Los Angeles, Cal.).....Major, A.U.S.

Nourse, M. H., Des Moines (U.S.N. Hosp., Corona, Calif.).....Lt. Comdr., U.S.N.

Patton, B. W., Des Moines (Camp Robinson, Ark.).....1st Lt., A.U.S.

Schlaser, V. L., Des Moines (Fleet PO, New York, N. Y.).....Lt. Comdr., U.S.N.

Singer, P. L., Des Moines (Camp Grant, Ill.).....1st Lt., A.U.S.

\*Snodgrass, R. W., Des Moines (APO 9528, New York, N. Y.).....Capt., A.U.S.

Uppgraff, Thomas, Des Moines (APO San Francisco, Cal.).....Capt., A.U.S.

Van Hale, L. A., Des Moines (Denver, Colo.).....Major, A.U.S.

**Pottawattamie County**

Kurth, C. J., Council Bluffs (Wichita, Kan.).....Major, A.U.S.

Mathiasen, J. W., Council Bluffs (APO 239, San Francisco, Cal.).....Capt., A.U.S.

Wurl, O. A., Council Bluffs (New Orleans, La.).....Lt. Col., A.U.S.

**Scott County**

†Baker, R. W., Davenport (APO 511, New York, N. Y.).....Capt., A.U.S.

Boyer, U. S., Davenport (Rock Island, Ill.).....Lt. Col., A.U.S.

Carey, E. T., Davenport.....1st Lt., A.U.S.

Coleman, Tom, Davenport (APO 230, New York, N. Y.).....Capt., A.U.S.

Hurteau, Everett, Davenport (APO 647, New York, N. Y.).....Capt., A.U.S.

Hurteau, W. W., Davenport (Camp Barkeley, Texas).....Major, A.U.S.

Perkins, R. M., Davenport (APO 121B, New York, N. Y.).....Capt., A.U.S.

Sheeler, I. H., Davenport (APO 350, New York, N. Y.).....Capt., A.U.S.

**Sioux County**

Gleysteen, R. R., Alton (Palo Alto, Cal.).....Comdr., U.S.N.

**Wapello County**

Brentan, Emanuel, Ottumwa (Camp Carson, Colo.).....Capt., A.U.S.

Howell, H. P., Ottumwa (Oakland, Cal.).....Major, A.U.S.

Struble, G. C., Ottumwa (Cleveland, Ohio).....Lt. Col., A.U.S.

**Washington County**

Boice, C. L., Washington (Oakland, Cal.).....Lt. Comdr., U.S.N.

Droz, A. K., Washington (Long Beach, Cal.).....Comdr., U.S.N.R.

Stutsman, R. E., Washington (Patuxent River, Md.).....Lt., U.S.N.R.

**Webster County**

†Thatcher, O. D., Fort Dodge (APO 634, New York, N. Y.).....Capt., A.U.S.

**Woodbury County**

Cowan, J. A., Sioux City (Lansing, Mich.).....Major, U.S.P.H.S.

Crowder, R. E., Sioux City (Kansas City, Mo.).....Lt. Comdr., U.S.N.R.

Knott, P. D., Sioux City.....Capt., A.U.S.

Simonsen, Marie N., Sioux City (Philadelphia, Pa.).....Lt., U.S.N.R.

**Wright County**

Doles, E. A., Clarion (Spokane, Wash.).....Capt., A.U.S.

(\*) Reported missing in action.

(†) Reported deceased in service.

(‡) Reported prisoner of war.

**ANNUAL FALL CLINICAL CONFERENCE**

The Kansas City Southwest Clinical Society will hold its annual conference in the Municipal Auditorium, Kansas City, Mo., October 7 through 10 this year.

Guest physicians who will take part in the scientific program are E. T. Bell, Minneapolis; Louis A. Buie and John S. Lundy, Rochester; R. B. Cattell, Boston; Warren H. Cole, Paul H. Holinger, Walter L. Palmer, Herbert E. Schmitz, and Willard Van Hazel, Chicago; Charles A. Doan, Columbus; A. I. Folsom and Tinsley R. Harrison, Dallas; L. H. Garland, San Francisco; Paul B. Magnuson, Washington; R. Glen Spurling, Louisville; and E. H. Watson, Ann Arbor.

A joint meeting with the county medical societies, Monday evening, October 7, will be a clinicopathologic conference. Participants will be E. T. Bell, M.D., (director) and Doctors Cattell, Doan, Garland, Harrison, Lundy, Van Hazel, and Watson.

There will be daily radio broadcasts, round table luncheons, and scientific and technical exhibits.

Special features will include a stag dinner with entertainment on Tuesday evening, alumni dinners on Wednesday evening, and entertainment for the visiting women.

If you have not received a copy of the Kansas City Medical Journal, one will be sent you upon request at the executive office, 630 Shukert Building, Kansas City 6, Mo.

**TWENTY-FIFTH ANNIVERSARY OF THE DISCOVERY OF INSULIN**

The twenty-fifth anniversary of the discovery of insulin will be observed with a program in Convocation Hall at the University of Toronto on September 16. Many internationally known figures in the field of medicine will be present to honor the occasion. Among them will be R. D. Lawrence, physician in charge, Diabetic Clinic, Kings College Hospital, London, England; H. C. Hagedorn, Gentofte, Denmark; Bernardo A. Houssay, Research Institute of Experimental Biology and Medicine, Buenos Aires, Argentina; and Elliott P. Joslin, Harvard Medical School, Boston, U.S.A. This observation will be followed by the regular annual meeting of the American Diabetes Association.

On September 23 an international diabetes clinic will be held at the Indiana University Medical Center in Herty Hall of the State Board of Health Building, Indianapolis, Ind. International importance will be given to this meeting by the presence of Professor Charles H. Best, Toronto, Canada, co-discoverer with Banting of insulin, Professor Houssay, Dr. Lawrence, and Dr. Hagedorn. They will discuss various phases of diabetic care.

# WOMAN'S AUXILIARY NEWS

MRS. KEITH M. CHAPLER, *Chairman of Press and Publicity Committee*, Dexter, Iowa

*President*—MRS. MARION H. BRINKER, Jefferson

*President-Elect*—MRS. FRED MOORE, Des Moines

*Secretary*—MRS. CHARLES A. NICHOLL, Panora

*Treasurer*—MRS. HENRY G. DECKER, Des Moines

## LINES FROM YOUR STATE PRESIDENT

Greetings: /

Another Auxiliary year is unfolding before us. With the end of vacation time, we shall resume our regular meetings, and our thoughts will turn to the mutual problems and opportunities which confront us.

Our new national president, Mrs. Jesse D. Hamer of Phoenix, Ariz., calls our attention to the extreme importance of the second objective of our national organization, namely, "to cultivate friendly relations and promote understanding among physicians' families." If we do nothing more than stress this objective in our meetings this year, building friendship and understanding among our members, our Auxiliary will justify its existence.

At our state meeting we endorsed two objectives or courses of study. One was a study of cancer control and the other a study of the Iowa program for handicapped children. Both of these projects certainly merit the attention and careful consideration of every doctor's wife. Let us inform ourselves so that we may discuss both topics intelligently. Material on cancer control may be obtained from the State Department of Health or the Iowa Department of the Field Army of the American Cancer Society, c/o Mrs. Dorothy McCarthy, 215 Second Street S. E., Mason City, Iowa. Help in the study of handicapped children may be obtained from Mrs. Dorothy Phillips, executive secretary of the Iowa Society for the Crippled and Disabled, Plymouth Building, Des Moines.

Your president, your immediate past president, Mrs. S. S. Westly, and Mrs. J. E. Reeder of Sioux City represented our state at the twenty-third national meeting of the Woman's Auxiliary to the American Medical Association held at the Fairmont Hotel, San Francisco, Cal., July 1 to 5. Although we were only three of almost a thousand women registered for the Auxiliary meetings, we put forth every effort to glean inspiration and guidance which would benefit our own Woman's Auxiliary.

Many thanks are due the California Auxiliary and the San Francisco County Auxiliary for their untiring efforts both before and during the convention which made it a success. In addition to having all details of the convention beautifully planned, the many extra courtesies extended visiting women, the exquisite floral decorations at the luncheons, and the many planned sight-seeing trips helped to

make it a perfect week. Even the weatherman cooperated by giving us a whole week of sunshine.

The National Auxiliary has six hundred and twenty-five organized counties with a membership of twenty-eight thousand, five hundred sixty-nine. If it is true, as so many physicians have suggested, that the Auxiliary is the social relations department of the Medical Association, surely even the smallest Auxiliary can be a force in furthering the aims and objectives of the Medical Association provided it makes itself an informed group.

A full report of all sessions of the San Francisco convention will be found in the September issue of *The Bulletin*.

The new national president is Mrs. Jesse D. Hamer of Phoenix, Ariz. Mrs. Eustace A. Allen of Atlanta, Ga., is the new president-elect. Atlantic City, N. J., has been chosen for the 1947 session.

It is the desire of your president to assist the county Auxiliaries in every way possible, and we shall appreciate your cooperation in making this a good year for our Auxiliary.

Mrs. M. H. Brinker,  
President.

## REPORT OF THE NATIONAL CONVENTION

On my arrival in San Francisco for the convention of the Auxiliary to the American Medical Association, I first attended a tea in honor of Mrs. David Thomas, national president, in the Gold Room at Hotel Fairmont. The profusion of flowers helped make it a gala occasion as did the meeting of old friends from various states.

The following day started with "Breakfast on Nob Hill," a radio broadcast of the entertainment being made.

Organized tours were conducted to acquaint visitors with San Francisco and vicinity. On the thirty-mile sight seeing tour de luxe, we visited old Mission Dolores, Twin Peaks, and the Golden Gate Park with the Steinhart Aquarium where we saw an assortment of fish, amazing both for their sizes and brilliant colors. There were five hundred different species and twelve thousand individual fish. The Cliff House featured the magnified view of the seals in their natural habitat on the rocks nearby. Other points of interest were Lincoln Park, the Palace of Fine Arts, Dutch windmills, lighthouses, Marine Yacht



Harbor, Fort Mason, and Alcatraz Island in the distance.

In the evening many of the members of the convention toured Chinatown including North Beach foreign settlement, the old Barbary Coast, and the wonderful view from Telegraph Hill. Some enjoyed lobster and shrimp from the open vats on Fisherman's Wharf.

At nine o'clock Tuesday morning the Auxiliary formally opened in the Gold Room of Hotel Fairmont with Mrs. David W. Thomas, president, presiding. The following program was given: Invocation—The Rev. Ezra Allen Van Nuys, rector of Calvary Presbyterian Church; the Pledge of Loyalty to the Woman's Auxiliary to the American Medical Association—led by Mrs. Eben J. Carey; greetings—Honorable Roger Lapham, mayor of San Francisco County, and Dr. Chester Cooley, president of San Francisco County Medical Society; address of welcome—Mrs. Ralph Eusden, past president of Woman's Auxiliary to the California Medical Association; response—Mrs. Charles J. Swalm, president of Woman's Auxiliary to the Medical Society of the State of Pennsylvania; introduction of Mrs. Clifford Long, convention chairman, and Mrs. Jesse D. Hamer, president-elect. Minutes of the twenty-second annual meeting were read by Mrs. A. A. Herold, constitutional secretary, followed by roll call. The address of the president, Mrs. David W. Thomas, was followed by reports of officers and directors. Iowa was represented by Mrs. M. H. Brinker, president, Jefferson; Mrs. J. E. Reeder, Sioux City; and Mrs. S. S. Westly, Manly, past president.

At noon a luncheon in honor of past presidents of the Woman's Auxiliary to the American Medical Association was held in Peacock Court, Mark Hopkins Hotel. Dr. William Harvey Perkins was the guest speaker. Prizes were awarded by Anne Delafield, director of Du Barry Success School.

The afternoon session consisted of reports of directors and chairmen of standing committees, the report of the nominating committee, and the election of the 1947 nominating committee.

The evening session was held in War Memorial Opera House for the doctors with the women as their guests.

Wednesday morning's session was held in the Red Room of Fairmont Hotel with Mrs. David W. Thomas presiding. Business consisted of minutes and announcements, report on registration, the memorial service by Mrs. Don Merrill, and reports of state presidents.

The annual noon luncheon in honor of Mrs. David W. Thomas, president, and Mrs. Jesse D. Hamer, president-elect, was held in the Gold Ballroom, Hotel Fairmont. The guest speakers were Dr. Roger I. Lee, president, and Dr. H. H. Shoulders, president-elect of the American Medical Association.

A Chicago firm furnished flowers for table decorations and corsages for everyone at each luncheon.

The afternoon session was a continuation of the

report of state presidents. Iowa's record was commendable, ranking second in new memberships. The organization of four new Auxiliaries and the remarkable number of new members-at-large was considered unusual.

The report of the chairman of the nominating committee was received and adopted, and officers were elected and installed for the coming year. The president's pin was presented to the outgoing president in an impressive ceremony followed by the inaugural address of Mrs. Jesse D. Hamer, the new president.

On July 4, we were taken on a tour across the Golden Gate Bridge into Marin County to Muir Woods National Monument. The forest of giant Redwoods was most impressive. The climax was the formal dinner held in the Hotel Fairmont Ballroom followed by the president's reception and ball at the Palace Hotel.

I thoroughly enjoyed the privilege of attending this convention and of helping contribute to the remarkable strides that the Woman's Auxiliary has made in cooperation with the American Medical Association in furthering the ideals and traditions of the medical profession.

Mrs. S. S. Westly,  
State President, 1945-46.

#### DALLAS-GUTHRIE AUXILIARY

The Dallas-Guthrie Auxiliary met at Perry, July 18. Following luncheon with the doctors, fifteen members met at the home of the president, Mrs. J. F. Loosbrock. Brief reports of the state meeting were given followed by a program of music and readings.

#### IOWA AUXILIARY DIRECTORS AND CHAIRMEN, 1946-47

##### Directors

Mrs. W. S. Reiley, chairman, Red Oak, one year.  
Mrs. Jay C. Decker, Sioux City, two years.  
Mrs. Soren S. Westly, Manly, three years.

##### Chairmen

Advisory—Robert L. Parker, M.D., Des Moines.  
Bulletin—Mrs. E. T. Warren, Stuart.  
Finance—Mrs. I. K. Sayre, St. Charles.  
Historian—Mrs. W. A. Seidler, Jamaica.  
Hygeia—Mrs. John F. Veltman, Winterset.  
Legislation—Mrs. R. L. Parker, Des Moines.  
Nurses' Loan Fund—Mrs. W. R. Hornaday, Des Moines.  
Organization—Mrs. Fred Moore, Des Moines.  
Parliamentarian—Mrs. J. A. Downing, Des Moines.  
Press and Publicity—Mrs. K. M. Chapler, Dexter.  
Program—Mrs. Leo C. Nelson, Jefferson.  
Public Relations—Mrs. Soren S. Westly, Manly.  
Revisions—Mrs. F. W. Mulrow, Cedar Rapids.

# HISTORY OF MEDICINE IN IOWA

*Edited by the Historical Committee*

DR. WALTER L. BIERRING, Des Moines, *Chairman*

DR. HENRY G. LANGWORTHY, Dubuque, *Secretary*

DR. CHARLES L. JONES, Gilmore City

DR. CLYDE A. HENRY, Farson

DR. LESTER C. KERN, Waverly

## Medical History of Dickinson County

FERDINAND J. SMITH, M.D., Milford

(Continued)

### PART II

In Dickinson County, named after a United States Senator from New York, there are more natural lakes than in any other part of the state. Spirit Lake in particular is the largest glacier-created lake of Iowa. The glacial character of many of these lakes, some nineteen in number, resembling low bowls filled with water and set down in the prairie, is evidenced by huge deposits of drift boulders of granite and red quartzite strewn along their shores.

#### ORGANIZATION OF NORTHWESTERN MEDICAL ASSOCIATION

The Northwestern Medical Association was organized Aug. 7, 1878. Officers were: President, W. F. Quirk, Aurelia; vice president, L. Cleaves, Cherokee; secretary and treasurer, F. H. Burlingame, Cherokee; censors, Edward Hornibrook and M. S. Butler, both of Cherokee, and J. B. Ingalls, Meridan.

Members were: A. L. Baker, Sac City; Edward Hornibrook, Cherokee; J. H. Ball, Newell; J. E. Ingalls, Meridan; E. L. Brownell, Spirit Lake; G. C. Moorehead, Ida Grove; J. H. Burlingame, Cherokee; J. L. Platt, Sioux City; R. L. Cleaves, Cherokee; W. L. Quirk, Aurelia; H. C. Crary, Spencer; J. E. Sherman, Cherokee; Chas. McAllister, Spencer; C. Smith, Emmetsburg; C. J. Hackett, Le Mars; J. N. Warren, Sioux City; E. A. Hall, Odebolt; J. J. Whitney, Emmetsburg; and M. S. Butler, Cherokee.

#### DR. E. Z. FUNK

Dr. E. Z. Funk, the last of the pioneer physicians of Dickinson County, came to Spirit Lake in March, 1882, and is still living and practicing his profession in Santa Rosa, N. Mex. He was born in LaFayette County, Wis., June 5, 1855. He was educated in the grade and high schools,

and his pre-medical education was received at the State Normal College of Wisconsin. He was graduated from Rush Medical College in 1882. Before graduation he had practiced one year in Hampton, Iowa, as an undergraduate. He practiced in Spirit Lake and vicinity for four years, in Cripple Creek, Colo., for eleven years, and in Old Mexico eight years later. His remaining years have been spent in Santa Rosa, N. Mex., where he has continued the practice of medicine.

In a letter to Dr. F. J. Smith, Dr. Funk states: "I recall quite clearly my trip late in March, 1882, from Spencer to Spirit Lake. It was a muddy drive. Motive power was a pair of horses. The railroads were built into the Lakes a year later. When I arrived at Spirit Lake I found a doctor by the name of Brownell who had a little office and a few medicines and was practicing there. Brownell dubbed me the 'boy doctor.' However, it was not long before I got even with him. He came to my office with a bad toothache and wanted to know if I could pull the tooth for him. I assured him I could, seated him in a chair, and extracted his offending tooth. The operation was a perfect success, but I had to put Brownell in my bed for two or three hours and give him plenty of stimulants. He soon overcame the shock, and afterwards we became quite friendly."

Dr. Funk further states, speaking of the physicians in Dickinson County during his sojourn: "At that time there were no M.D.'s at Milford, and up to the time when I left Spirit Lake there was no physician at Lake Park. There were not enough of us to have a county medical association, but we did, however, have a Northwest Iowa County Medical Association composed of medical men from five or six of the counties located in the northwest corner of the state."



He also remarks, "It still gives me a hard chill whenever I allow myself to think of the drives I used to make at night across prairies in a blizzard such as that section could start with the least effort."

DR. EVERETT

Dr. Everett located in Milford as a young man in 1872. He practiced only a few months, returning to his former home in Illinois because of ill health. He died within a year.

DR. L. C. WINDSOR

Dr. Windsor came to Spirit Lake in December, 1886, succeeding Dr. E. Z. Funk. A native of Connecticut, he was 24 years old when he came to Spirit Lake. He was graduated from Bellevue Hospital College, N. Y., in June, 1885. Though he practiced at Spirit Lake about two years, no further record of him is available.

DR. L. M. VAN BUREN

Dr. L. M. Van Buren came to Spirit Lake in 1887. He was graduated from the Berkshire Medical School, Pittsfield, Mass., in 1853. He was 53 years old when he located in Spirit Lake, having previously practiced in Wisconsin and eastern Iowa. After a few years he retired from active practice, but continued to live in Spirit Lake until his death in 1911.

DR. ALBERT RECTOR

Dr. Rector was born on a farm near Fennimore, Wis., in 1873. He had two years of postgraduate work in the Chicago College of Eye, Ear, Nose and Throat, the Illinois Eye and Ear Infirmary, and the Manhattan Eye, Ear, Nose and Throat College, New York City. He was graduated from the Rush Medical College in 1897, after which he practiced at Lake Park until September, 1900. One year later he was married to Emma Morse of Lancaster, Wis. They have two living sons.

He continued practice at Lake Park until September, 1900, then located at Spirit Lake for three years. From there he went to Chicago and New York for postgraduate work, after which he located in Appleton, Wis., limiting his practice to diseases of the eye, ear, nose, and throat.

Dr. Rector was medical examiner for Aetna, the New York Life, Bankers Life of Des Moines, and many other insurance companies while in practice. He is now a member of the Wisconsin State Board of Health, a licentiate of the American Board of Otolaryngology, and past president of the Wisconsin State Medical Society.

ORGANIZATION OF DICKINSON COUNTY  
MEDICAL SOCIETY

The first medical association was organized in 1902 in Dickinson County with Dr. Albert E. Rector its first president and Dr. E. A. Beare of Superior as secretary.

DR. GEORGE LESLIE ADKINS

Dr. George Leslie Adkins was born in Clear Lake, Iowa, Sept. 20, 1876. When eight years old he moved with his parents to a farm northeast of Spirit Lake. After completing the grade and high school at Spirit Lake he entered the College of Medicine of the State University of Iowa and was graduated in 1905. On June 28, 1905, he married Fern Stow of Spirit Lake and immediately began the practice of medicine in Superior, Dickinson County, Iowa.

On Sept. 17, 1918, he enlisted in the Medical Corps of the United States Army and was stationed temporarily at Camp Oglethorpe, Ga. Later he was transferred to Hoboken, N. J., where he served as transport surgeon, and crossed to France on the British ship *Moleta*. Upon his return he was appointed to the examining board for casual officers. After being discharged from service, he spent a short time in Superior, Iowa, after which he became associated with Dr. Coleman of Estherville. In November, 1919, he moved to Jackson, Minn., where he remained until his death. While he was doing a surgical operation upon a boy injured in an auto accident, he suffered a heart attack and died within an hour. It was a great shock to the people in and around Jackson, Minn. He had had an extensive practice, and it was difficult to replace this much beloved physician.

DR. A. H. SCHOOLEY

Dr. A. H. Schooley was born in Winfield, Iowa, on Oct. 7, 1871, the son of Jonathan and Helen Lenox Schooley. After completing the grades and high school, he attended Mount Pleasant Academy and the Iowa State Teachers College. His medical education was obtained in the Medical School of the State University of Iowa from which he was graduated. Dr. Schooley did postgraduate work in Chicago and at the Mayo Clinic in Rochester, Minn. He came to Dickinson County about 1906. Dr. Schooley wrote "Twenty Years of Obstetrics in Country Practice" which he read before the Upper Des Moines Medical Association and which he published in the *JOURNAL OF THE IOWA STATE MEDICAL SOCIETY*. Dr. Schooley, during his thirty-three years of practice,

never lost a mother in 1,455 cases, a fine record indeed! He died in 1939.

#### DR. JOHN GEISSINGER

Dr. John Geissinger was born Feb. 5, 1880, in Montezuma, Iowa, to Mr. and Mrs. J. W. Geissinger. After completing grade and high schools, he attended the Highland Park College at Des Moines for two years then took a course at Northwestern University Medical School in Chicago, graduating in 1907.

Dr. Geissinger married Ellen J. Anderson of Milford, Iowa, where he established a general practice. He later moved to Spirit Lake and by 1920 was a specialist in pediatrics in St. Paul, Minn. For the last ten years he has been in Pueblo, Colo., confining his medical practice to pediatrics. He has two children, a son and a daughter, both married, the former being on active duty in the United States Navy.

#### DR. C. O. EPLEY

Dr. C. O. Epley was born Dec. 25, 1882, on the home farm near Shell Rock, Butler County, Iowa. Dr. Dudley, then at Shell Rock, was the attending physician. Dr. Epley's father, Jacob H. Epley, was born in Pennsylvania; he was a farmer and a Civil War veteran. His mother, Mary Decker, was born in Germany and was the mother of nine children.

Dr. Epley took a medical course at the Illinois University College of Medicine, Chicago, from which he was graduated in 1910. He served a seven months' internship at Augustana Hospital, followed by a six months' internship at the Hospital of the Good Shepherd, Syracuse, N. Y., and three months with Dr. L. C. Kern at Waverly, Iowa.

He was married to Valtina E. Carbauh, a graduate of West Side Hospital, in December, 1909.

Dr. Epley was examiner for a number of insurance companies, including the Equitable of Iowa, the Northwestern Life of Milwaukee, the Central Life of Des Moines, and the New York Life.

Dr. Epley, who practiced in Spirit Lake from 1918 to 1930, did surgery along with general practice, specializing in proctology. He maintained two to four beds in private homes where he cared for most of the surgical cases, although some were taken to Spencer Hospital. His wife assisted both Dr. Epley and colleagues from neighboring towns as anesthetist.

#### DR. P. G. GRIMM

Dr. P. G. Grimm was born at Blair, Neb. He was graduated from Blair High School in 1889.

He studied medicine at Rush Medical College from 1889 to 1893 and at Philadelphia Polyclinic in 1897. After practicing medicine in the Black Hills for ten years and in southern Nebraska for fifteen years, Dr. Grimm came to Spirit Lake in 1918. He was married in 1901 and has three children, two boys and one girl. The youngest son is a Chief Pharmacist's Mate in the Navy and at present is on duty on a destroyer in the Pacific.

Dr. Grimm has been surgeon for the Milwaukee Railway for fourteen years and a life insurance examiner for thirty corporations. At present he is president of the Dickinson County Medical Association.

#### DR. ARTHUR F. SMITH

Dr. Arthur F. Smith was born to Dr. and Mrs. Ferdinand J. Smith in Alton, Iowa, on Sept. 7, 1891. He attended grade and high schools in Des Moines, doing two years of premedic work at Drake University. He was graduated from the Medical Department of the University of Minnesota in 1920. He had three years of internship, besides spending several summers in the office of Dr. F. J. Smith in Little Rock, Iowa.

Dr. A. F. Smith was married to Miss Isabelle Amundson of Milford, Iowa, where he located in 1920, associating himself with Dr. Q. C. Fuller at his hospital. Later they dissolved partnership, and Dr. Smith opened an office in Milford. He eventually left Milford and has since been practicing medicine in Manning, Iowa. He has a general practice, specializing in piles, varicose veins, allergy, and hay fever. He was examiner for the New York Life Insurance Company from 1921 to 1928.

#### DR. CASSIUS MILO COLDREN, JR.

Cassius Milo Coldren, Jr., was born in Milford, Iowa, on Jan. 13, 1894, to Dr. Cassius M. and Emma L. Coldren. He received his training at Iowa State College in Ames and Hillsdale College at Hillsdale, Mich., where he was graduated with an A.B. degree. His first two years of medical training were obtained at Ann Arbor, but he was graduated from the University of Chicago Medical School in 1918 with special honors. He is a member of Alpha Omega Alpha honorary fraternity, Delta Tau Delta, and Alpha Kappa Kappa, a medical fraternity. Following his graduation, he spent a year of internship at Presbyterian Hospital in Chicago and one year at the University of Minnesota on a teaching fellowship under the Rockefeller Foundation. Dr. Coldren died in October, 1931, at Milford.

(To be continued)



# THE JOURNAL BOOK SHELF

## BOOKS RECEIVED

**ANESTHESIA IN GENERAL PRACTICE**—By Stuart C. Cullen, M.D., Head of Division of Anesthesiology, Department of Surgery, State University of Iowa Hospitals; Associate Professor of Surgery (Anesthesiology), State University of Iowa College of Medicine. The Year Book Publishers, Inc., Chicago, 1946. Price, \$3.50.

**DISEASES OF THE RETINA**—By Herman Elwyn, M.D., Senior Assistant Surgeon, New York Eye and Ear Infirmary. The Blakiston Company, Philadelphia and Toronto, 1946. Price, \$10.

**ELECTROCARDIOGRAPHY IN PRACTICE**—By Ashton Graybiel, M.D., Capt., M. C., U.S.N.R. Co-ordinator of Research, U. S. Naval School of Aviation Medicine, Pensacola, Florida; and PAUL D. WHITE, M.D., Lecturer in Medicine, Harvard Medical School, Physician, Massachusetts General Hospital; with the assistance of LOUISE WHEELER, A.M., Executive Secretary, the Cardiac Laboratory, Massachusetts General Hospital; CONGER WILLIAMS, M.D., Assistant in Medicine, Harvard Medical School and Massachusetts General Hospital. Second edition. W. B. Saunders Company, Philadelphia, 1946. Price, \$7.00.

**PERIPHERAL VASCULAR DISEASES**—By Edgar V. Allen, B.S., M.A., M.D., M.S. in Medicine, F.A.C.P., Division of Medicine, Mayo Clinic, Associate Professor of Medicine, Mayo Foundation, Graduate School, University of Minnesota; Diplomate of the American Board of Internal Medicine; NELSON W. BARKER, B.A., M.D., M.S. in Medicine, F.A.C.P., Division of Medicine, Mayo Clinic, Associate Professor of Medicine, Mayo Foundation, Graduate School, University of Minnesota; Diplomate of the American Board of Internal Medicine; and EDGAR A. HINES, JR., M.D., B.S.,

M.A., M.S. in Medicine, F.A.C.P., Division of Medicine, Mayo Clinic, Associate Professor of Medicine, Mayo Foundation, Graduate School, University of Minnesota; with Associates in the Mayo Clinic and Mayo Foundation. W. B. Saunders Company, Philadelphia, 1946. Price, \$10.

**OPHTHALMOLOGY IN THE WAR YEARS, VOLUME I (1940-1943)**—Edited by Meyer Wiener, M.D., Professor of Clinical Ophthalmology, Washington University School of Medicine; Honorary Consultant in Ophthalmology, Bureau of Medicine and Surgery, United States Navy. The Year Book Publishers, Inc., Chicago. Price, \$13.50.

**RENAL DISEASES**—By E. T. Bell, M.D., Professor of Pathology in the University of Minnesota, Minneapolis, Minnesota. Lea & Febiger, Philadelphia, 1946. Price, \$7.00.

**SEX PROBLEMS OF THE RETURNED VETERAN**—By Howard Kitching, M.D., Foreword by Ernest R. Groves, Professor of Sociology, University of North Carolina. Emerson Books, Inc., New York, 1946. Price, \$1.50.

**SQUINT AND CONVERGENCE**—A Study in Di-Ophthalmology. By N. A. Stutterheim, M.D. (Rand), State Medical Qualification, Holland; formerly Surgeon to the Eye Clinic, University, Leyden; Part-time Ophthalmic Surgeon to the Johannesburg School Clinic, Education Department, Transvaal; with twenty-six graphs and fifteen diagrams of implementations. H. K. Lewis & Co. Ltd., London, 1946. Price, \$3.65.

**A TEXTBOOK OF GYNECOLOGY**—By Arthur Hale Curtis, M.D., Professor and Chairman of the Department of Obstetrics and Gynecology, Northwestern University Medical School; Chief of Gynecological Service, Passavant Memorial Hospital, Chicago. Fifth edition. W. B. Saunders Company, Philadelphia, 1946. Price, \$8.00.

## BOOK REVIEWS

### CORNELL CONFERENCES ON THERAPY, VOLUME I

Edited by Harry Gold, M.D., Managing Editor; David P. Barr, M.D., Eugene F. DuBois, M.D., McKeen Cattell, M.D., Charles H. Wheeler, M.D., Editorial Board. The Macmillan Company, New York, 1946. Price, \$3.25.

This book comprises an open forum type of conference on therapy set down word for word with each chapter covering one particular subject. These conferences, held at Cornell University Medical College in New York City, comprise a group of timely subjects which are freely discussed by teachers and practitioners. The informality of these meetings serves to hold the interest of the reader, and the pro and con of new therapy is given a thorough airing.

Subjects covered include "Digitalis vs. Digitoxin," "Use and Abuse of Bed Rest," and the "Rh Factor in Therapy." The opening chapter on "The Doctor's Bag" is stimulating reading. L. E. R.

### DIABETES, A CONCISE PRESENTATION

By Henry J. John, M.A., M.D., F.A.C.P.; Lt. Col., M. C.; Cleveland, Ohio. Illustrated. The C. V. Mosby Company, St. Louis, 1946. Price, \$3.25.

This book, which comprises three hundred pages, should be read and reread by anyone treating diabetes because of its vast wealth of information.

William S. Middleton, who was associated with Dr. John during the war, has written a highly instructive foreword. The book itself was written by

a man who has had twenty-five years experience in treating diabetes. Having had personal experience with a great many thus afflicted, he realizes the problems confronting all of them, particularly children. Dr. John established a diabetic camp for children which proved highly instructive as well as helpful to the parents.

The book includes diagnosis and differential diagnosis of glycosurias, an analysis and interpretation of blood sugars, the cause and treatment of the diabetic coma, the problem of surgery, and what information is now known about the etiology, prevention and outcome of the disease. The reviewer is sorry, however, that Dr. John did not analyze the problem and possibilities of alloxin and pituitary in the cause, treatment, or cure of diabetes.

E. B. W.

### DISEASES OF THE SKIN For Practitioners and Students

By George Clinton Andrews, M.D., Associate Clinical Professor of Dermatology, College of P. and S., Columbia University; Chief of Clinic, Dept. of Dermatology, Vanderbilt Clinic; Chief of Dermatology Clinic, Roosevelt Hospital; Attending Dermatologist to Presbyterian Hospital and Roosevelt Hospital; Consulting Dermatologist and Syphilologist to Tarrytown Hospital; Grasslands Hospital, Valhalla, St. Johns Hospital, Yonkers, Greenwich Hospital and the Beekman-Downtown Hospital. Third edition. W. B. Saunders Company, Philadelphia, 1946. Price, \$10.

This is rightfully one of the most practical and popular texts of dermatology. It deals directly with diagnosis and treatment, giving special prominence to the more common dermatoses, while it also covers all skin diseases one may encounter.

The many new advances since the previous editions have necessitated a complete rewriting. This is especially true in regard to the use of penicillin in the treatment of many dermatoses and of syphilis. Penicillin is the treatment of choice for early syphilis and is desirable for treatment of late syphilis.

Radiation therapy produced at 60 K.V. is recommended instead of the more usual higher K.V., thus lessening the hazards caused by deep penetration.

Concise, forward, easily followed methods of treatment are given throughout the text. It should be in the hands of students, general practitioners and dermatologists.

L. W. K.

#### PNEUMOPERITONEUM TREATMENT

By Andrew Ladislaus Banyai, M.D., Associate Clinical Professor of Medicine, Marquette University Medical School, Milwaukee, Wis.; Member, Editorial Board, "Diseases of the Chest"; Formerly preceptor in Tuberculosis, School of Medicine, University of Wisconsin, Madison, Wis. The C. V. Mosby Company, St. Louis, 1946. Price, \$6.50.

This small volume offers encyclopedic information on the use of pneumoperitoneum. In addition to a discussion of his own extensive studies, the author presents adequately the writings of others. An exhaustive discussion is given of the effect of this treatment on the mechanisms of healing induced in the abdominal and thoracic regions. There is presented an unbiased discussion of the limitation and advantages of pneumoperitoneum, which has assumed increased importance in recent years.

R. E. S.

#### PREOPERATIVE AND POSTOPERATIVE TREATMENT

Edited by Lt. Col. Robert L. Mason, M. C., A. U. S., Cushing General Hospital, Farmington, Mass.; and HAROLD A. ZINTEL, M.D., Harrison Department of Surgical Research, University of Pennsylvania School of Medicine; Assistant Surgeon, Hospital of the University of Pennsylvania. Second edition. W. B. Saunders Company, Philadelphia, 1946. Price, \$7.

This book is a complete coverage of pre- and postoperative treatment, discussing in detail conditions affecting the operative risk, nutritional disorders in the surgical patient, and management

of surgical patients with heart disease, hypertension, nephritis, and diabetes.

There are well written chapters on anesthesia, shock, water balance, acidosis and alkalosis, blood transfusions, ilius, including postoperative pulmonary complications, urinary tract complications, parotitis, venous thrombosis, burns, and physical medicine in surgical practice.

Part two deals with regional pre- and postoperative care which includes sections on E.E.N.T., hypertension, empyema, subphrenic abscess, biliary tract, stomach and duodenum, appendicitis, acute obstruction of small intestine, gynecology, colon and rectum, urologic surgery, and traumatic injuries.

In general, this book offers to the medical profession in a concise, well presented, informative manner what to do before and after surgery.

H. G. E.

#### WOMEN IN INDUSTRY

Issued under the auspices of the Division of Medical Sciences and the Division of Engineering and Industrial Research of the National Research Council. Prepared in the Army Industrial Hygiene Laboratory by ANNA M. BAETJER, Sc.D., Assistant Professor of Physiological Hygiene, School of Hygiene and Public Health, The Johns Hopkins University. W. B. Saunders Company, Philadelphia and London, 1946. Price, \$4.

This book is of interest because it gives surveys of the effect of industry on the health and efficiency of women. It is estimated that there will be about sixteen million women in industry by 1950.

The last chapter gives an excellent summary and conclusions of the facts found by compiling many reports from large industries and government agencies. Women have only about 60 per cent of the physical strength of men. Their machines and work should be adjusted to their size and strength. They have more sick absenteeism than men, but are off fewer days at a time. Their chief causes of sick absenteeism are respiratory diseases. Home responsibilities play a large part in the absenteeism of women. Women do not fatigue more easily than men. Excessive hours of work lead to a decrease in output. Forty-eight hours a week is considered a proper amount. Attention should be given to the mental and emotional adjustment of women as well as the physical. Clothing has little importance as a cause of accidents. Women have a much lower rate of industrial accidents than men and are not more susceptible to occupational diseases than men. The custom of discharging women because of pregnancy is disapproved as it only leads to concealment at the time when the pregnant woman needs a proper environment. If a working environment is safe for men, it is safe for women.

N. S. N.



## SOCIETY PROCEEDINGS

### Cerro Gordo County

The Austin-Flint-Cedar Valley Medical Society and the Cerro Gordo County Medical Society entertained approximately one hundred doctors and their wives August 10 at the All Veterans Social Center in Clear Lake. A 6:30 o'clock dinner was served at which Dr. A. W. Adson of Rochester, Minn., was the speaker.

### Sac County

The Sac County Medical Society met at Hotel Park, Sac City, July 11. Guests of the group were the trustees of Loring Hospital and the nurse, Miss Glanz, who was leaving to join the Porath Hospital in Storm Lake. The Society presented Miss Glanz with a dozen roses as a farewell gift.

### Scott County

The Scott County Medical Society had a fish fry on July 31 and the group's annual picnic on August 28. Both events, the former of which was with the compliments of a local drug store, were held at Shorey's farm.

### Upper Des Moines Medical Society

The summer meeting of the Upper Des Moines Medical Society was held at Lake Okoboji August 22. Five faculty members of the State University of Iowa College of Medicine gave talks. The speakers and their subjects were: Dr. William D. Paul, "Physical Medicine and the General Practitioner"; Dr. Russell Meyers, "Management of Acute Cerebral Trauma"; Dr. Robert Jackson, "The Importance of Breast Feeding"; Dr. Fredric Simpson, "Diagnosis of Rheumatic Fever"; and Dr. Robert Newman, "Disabilities of the Feet and Ankles."

### PERSONAL MENTION

Dr. Frank A. Adrian of Sigourney is retiring from active practice September 1 after forty-two years of service in Keokuk County, twenty-four of which were in his present location and the balance in Harper. Dr. and Mrs. Adrian plan to travel extensively, visiting with relatives in various states.

Dr. James W. Agnew, formerly of Iowa City, has entered private practice in Davenport with offices in the Union Bank Building.

Dr. Reu L. Barnett, in behalf of the physicians of Atlantic, formally presented the Atlantic Memorial Hospital to the city in a ceremony July 21. The hospital formerly was owned by a group of Atlantic doctors.

Dr. Robert M. Bartels has entered private practice in Sioux City, his offices being located in the Davidson Building. Dr. Bartels formerly was at Iowa City.

Dr. Cleanthus E. Birney, who has practiced in Estherville since 1894, retired August 1. He expects to take an extended trip and then move to Spirit Lake where he has purchased a house.

Dr. J. E. Blumgren opened offices in Shellsburg recently. Since his discharge from the navy he has been associated with Dr. Earl D. Lovett and Dr. Gerald A. Fry of Vinton.

Dr. John J. Buchanan reopened his medical practice in his former offices in Milford July 29.

Dr. Howard C. Bos has announced the opening of his offices in the Killips Building, Oskaloosa, for the practice of medicine.

Dr. John W. Castell and family returned to Fairfield to make their home on September 1. Dr. Castell has been on the staff of the Harken Hospital, Osceola, since his discharge from the Army Medical Corps several months ago.

Dr. James H. Coddington has re-established his practice in Humboldt where he was associated with his father, the late Dr. J. K. Coddington, prior to his entrance into service. Since his discharge from the Army Medical Corps, he has completed post-graduate work at the Cook County Hospital, Chicago, and the University Hospital, Iowa City.

Dr. William D. Collings and Dr. William C. Keettel, Jr., have been appointed to the faculty of the State University of Iowa College of Medicine. Dr. Collings, formerly of the University of Texas Medical School, assumed the position of assistant professor in physiology August 1. Dr. Keettel, who was discharged from the Army Medical Corps in which he held the rank of Captain on August 20, will be assistant professor of obstetrics and gynecology. He was a member of the faculty there from 1937 to 1940.

Dr. James B. Conlon joined the Cogley Clinic in Council Bluffs as a general practitioner in July. Dr. Conlon was recently released from the Navy Medical Corps in which he served three years.

Dr. Morton R. Crew, recently released from active duty with the Navy Medical Corps, is planning to begin medical practice in Clearfield in the near future.

**Dr. Edward J. Drew**, who completed a four-year residency in general surgery at the University Hospitals, Iowa City, opened offices in the Bankers Trust Building, Des Moines, August 1. He will limit his practice to surgery.

**Dr. John W. Dulin**, who resigned as professor of general surgery at the State University of Iowa July 1, will rejoin the College of Medicine faculty as clinical professor of surgery at the University Hospital. He will also enter private practice as a general surgeon in Iowa City.

**Dr. Lester Dyke** has purchased a half interest in the medical practice of Dr. Gerrit Maris of Hull and plans to begin work about September 1. He has recently returned from Washington, D. C., where he was a member of the staff of the Surgical Service of Walter Reed General Hospital.

**Dr. L. W. Eller** opened his offices for the practice of medicine in Clarinda. Prior to his four years' service in the Army Medical Corps, he practiced in Kanawha five years. He recently completed three months' work in internal medicine at the University of Minnesota.

**Dr. Harold J. Evans** has resumed private practice in Davenport after serving four years in the Army Medical Corps.

**Dr. Lawrence O. Goodman** has become affiliated with the Marshalltown Medical and Surgical Clinic, beginning his work there August 1. He will limit his practice to internal medicine.

**Dr. Robert H. Harris**, recently discharged from the Army Air Corps, is now taking special medical training at the University of Illinois in Chicago.

**Dr. John C. Herman** has announced the purchase of the Boone Clinic and its equipment. The medical partnership of Dr. Nelson M. Whitehill, Dr. Ben T. Whitaker, and Dr. Herman is likewise being dissolved. Dr. Whitaker will move to the Boone County Hospital where he will devote most of his time to x-ray work. Dr. Whitehill will continue to practice and have offices in the Clinic Building.

**Dr. Frank A. Hubbard** of Columbus Junction announced his retirement from the active practice of his profession. A life member of the Iowa State Medical Society, he has served as physician and surgeon in that community more than fifty-one years.

**Dr. Max Krakauer** of Davenport, who is on terminal leave from the Army Medical Corps until September 3, began August 1 to serve a one-year residency at Michael Reese Hospital in Chicago. Dr. Krakauer, who holds the rank of Major, returned from overseas June 11.

**Dr. Joseph Lederman**, who was released from the Royal Canadian Army Medical Corps with the rank of Captain in March, will enter private practice in Oskaloosa early this fall.

**Dr. Eugene J. Maire**, formerly of Humphrey, Neb., and Vail, Iowa, has entered private practice with Dr. John Cleland in Oregon City, Ore.

**Dr. William Provine, Jr.**, has become a member of the staff of the Bamford Clinic of Centerville. Formerly of Kansas City, Mo., he served in the armed forces eighteen months.

**Dr. A. W. Puntenney**, formerly of Kansas City, Mo., has begun practice in Stratford. He was recently discharged after twenty-six months in service.

**Dr. Gerald R. Rausch** is now taking residency training in neuropsychiatry at Washington University, St. Louis, Mo., after completing three months of postgraduate study at the University of Illinois College of Medicine.

**Dr. Jeanette Dean Throckmorton** received a first prize and an award of merit on two quilts and a first prize on a hand painted china vase at the exhibition of American Physicians Art Association in San Francisco. **Dr. Robert B. Armstrong** of Ida Grove received an award of merit on his entry in the color photography division.

**Dr. Eugene C. Wagner** has located in Plainfield where he will practice medicine and surgery in association with Dr. Werner P. Pelz of Nashua. Dr. Wagner opened his office August 10.

**Dr. Charles R. Wilson** of Ogden has purchased the medical practice of the late Dr. R. G. Hinrichs of Manson. Dr. Wilson, who was released from active duty with the Navy Medical Corps July 6, took over the practice in August.

**Dr. Rollin W. Wood** of Newton announced his retirement from active practice after nearly thirty years' service in that location. Dr. Liberty E. Fellows, who has been associated with Dr. Woods since 1928, will take full charge of the office until a suitable successor is named. Dr. Woods specialized in diseases of the eye, ear, nose, and throat.

**Eight resident doctors** have been appointed to the staff of the University Hospital, according to announcement of Dean Ewen M. McEwen of the College of Medicine. They are Dr. Orrie Couch, Dr. Henry Hamilton, Dr. Raymond Sheets, Dr. Charles W. Wilson, Dr. William Sawtell, Dr. Frederick Brush, Dr. Otto F. Kraushaar, and Dr. Robert Hickey.



# The JOURNAL of the Iowa State Medical Society

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## THE PROBLEM OF CERTAIN ANIMAL DISEASES PREVALENT IN IOWA AS RELATED TO HUMAN MEDICINE

Richard E. Shope, M.D.

Department of Animal and Plant Pathology of The Rockefeller Institute for Medical Research, Princeton, N. J.

Progress in the understanding and control of animal diseases has been made possible, as it has in the case of human disease, by constant and skilled research and clinical observation. Considered circumspectly, there is really little if any difference in the way one gains information concerning an infectious disease and the means by which it may be controlled, whether that disease is one of hogs, cattle, chickens, or humans. Actually, however, it is easier to study infectious diseases of animals than it is those of man, and not infrequently information gained from a better understanding of an animal disease is directly applicable to, or points the way to similar information concerning a related human disease not so amenable to experimental study. It is with this phase of the relationship between animal diseases and human medicine that I wish to deal in the present paper.

While many animal diseases might be selected to illustrate the relationship, I have chosen to discuss only three with which I am personally familiar. The starting material for study in the cases of all three diseases originated in Iowa though none are limited to that state. The animal diseases which will be considered in the light of their relationship to human medicine are swine influenza, bovine pseudorabies, and rabbit papillomatosis. I shall attempt to point out how a better understanding of each of these has resulted in an actual or potential advance in our knowledge concerning some aspect of disease in man.

### SWINE INFLUENZA

Swine influenza is an acute infectious respiratory disease of swine caused by the bacterium *Hemophilus influenzae suis* and the swine influenza

virus acting in concert.<sup>1</sup> It occurs annually in epizootics throughout the Middle West starting, as a rule, in late October or November and lasting until some time after Christmas. The mortality from the disease is relatively low, probably averaging about 2 per cent, but its morbidity is high and affected swine are slow in regaining their full vigor and growth rates. Death when it occurs is usually the result of a bloody edematous "waterlogged" type of pneumonia.

One of the most intriguing features of the disease concerns its reputed origin. So far as can be learned, swine influenza, as we know it today, did not exist prior to 1918. It appeared as a brand new veterinary problem sometime during the autumn of that year at a time when a great human influenza pandemic was in progress. Dr. J. S. Koen, an inspector in the Division of Hog Cholera Control of the Bureau of Animal Industry, was the first, according to Dorset McBryde and Niles,<sup>2</sup> to recognize this disease as being different from any previously encountered. Impressed by the coincidental prevalence of human influenza and by the resemblance of the signs and symptoms seen in man to those occurring at the time in hogs, Dr. Koen was convinced that the two diseases were actually the same. He therefore gave the name of "flu" to this new disease of hogs. The opinion of Koen that "flu" represented an entirely new swine epizootic disease and that swine might have been infected in the first instance from man was shared by some veterinarians and many farmers in the Middle West. Furthermore, the name "flu" or, more properly, swine influenza, became a generally accepted designation for the condition. Subsequent experimental work with both swine and human influenza has demonstrated how very accurate an opinion this first guess of Dr. Koen's really was. It is the more remarkable because it was made at a time when the etiology of neither swine nor human influenza was known.

The statement that no animal except man ac-

quires influenza under natural conditions is encountered frequently in the older medical literature, and it was this apparent lack of an experimental animal, susceptible to influenza, that so greatly handicapped investigative work with the disease during the 1918 pandemic. Had a susceptible experimental animal been known at that time the information that might have been gained would have been of tremendous help in better understanding and combating the disease. The really sad part of the whole situation, as it appears now, is that we really did have a susceptible animal and that it actually did become infected on a large scale during the 1918 pandemic but that no one in a position to do good investigative work recognized the nature of the disease phenomenon that was taking place right under our noses. Fortunately for a better understanding of influenza but unfortunately for middle western hog raisers, Nature seems to have compensated for this neglectful oversight of medical scientists and perpetuated swine influenza so that it has occurred each autumn since 1918 and can be studied leisurely whenever one cares to do so.

The etiology of swine influenza was finally determined in 1931 and it proved to be different in character from that of any hitherto known disease of animals or man. Instead of being caused by a single agent, swine influenza was found to result from infection with two such agents, one a virus, and the other a bacterium, acting synergistically. The virus differed from any previously known, and caused, when administered alone to swine, an extremely mild, indefinite, usually afebrile ailment which, for want of a better name, was designated "filtrate disease."<sup>1</sup> The bacterium was very similar to, if not identical with, the non-indole producing type of Pfeiffer's *Hemophilus influenzae* and was named *Hemophilus influenzae suis*.<sup>3</sup> When administered alone to swine, it proved nonpathogenic. Only when the virus and the bacterium were administered together intranasally to swine did typical influenza result.

Here then in swine influenza was a bacterium like that believed by many at the time to be responsible for influenza in man. Leaving out of consideration for the moment the possibility that *H. influenzae suis* and *H. influenzae* might play analogous roles in their respective diseases, it was striking to find these similar bacteria closely associated with like diseases occurring in two animal species. The finding furnished additional evidence of a possible relationship between swine and human influenza. Furthermore, the demonstration that swine influenza was caused by the combined activity of this Pfeiffer bacillus-like organism and

a filtrable virus made the suggestion obvious that the swine disease might actually be an etiologic replica of human influenza. The thing lacking so far as the human disease was concerned was positive proof that a filtrable virus was present. Though long suspected, none had been convincingly demonstrated.

It was about two years after the discovery of the cause of swine influenza that three investigators in England studying an outbreak of influenza there demonstrated conclusively that a filtrable virus was involved etiologically in the human disease.<sup>4</sup> Strangely enough, though perhaps it should have been predictable, the human influenza virus proved to be remarkably like that involved in influenza of hogs. Both agents have in the past thirteen years been exhaustively studied, and nothing has been found to alter the initial impression that the swine influenza virus and the human influenza virus of the type first recovered from man are closely related. The original human virus and many other strains like it have been designated as Type A influenza virus<sup>5</sup> to distinguish them from an immunologically different type of virus recovered from more recent outbreaks of human influenza and known as Type B influenza virus.<sup>6</sup> The swine influenza virus, by all the tests that are customarily applied in typing an influenza virus, would be classed as a Type A agent and, were it not for its known porcine origin, I doubt that any question of its identity with the human viruses would be raised. While the human viruses grouped as Type A are serologically quite diverse,<sup>7</sup> the swine viruses that have been studied are immunologically as closely related to various strains of human influenza virus as are some of the human strains to each other.

Studies of the swine and the human influenza viruses have run roughly parallel throughout the years that have elapsed since the human agent was discovered. In some instances observations advancing our knowledge of influenza were made initially with the swine virus, in others with the human virus. The situation has been very definitely one of mutual benefit, and I doubt that anyone could justifiably challenge the statement that today we have a better understanding of human influenza by virtue of having had available for study swine influenza and its causative agents. In like manner it is equally evident to anyone familiar with the field that swine influenza has benefited greatly from the application of observations made initially with the human virus. On every point in which parallel observations have been possible, analogous findings have been made with the swine and the human agents. In the beginning



when it was first found that ferrets were susceptible to the human virus,<sup>4</sup> the observation that they were also susceptible to the swine virus soon followed. Then when it was discovered that ferrets infected with swine virus while anesthetized developed pneumonia,<sup>8</sup> the observation that the same was true in the case of the human virus soon followed.<sup>9</sup> Both agents were found capable of producing fatal pneumonia in mice,<sup>10</sup> both grew in embryonating hens' eggs,<sup>11</sup> they were similar in size<sup>12</sup> and in all other properties that could be measured.

Early in the work with swine influenza, in fact before the human virus had yet been discovered, it was demonstrated that swine influenza virus given intramuscularly to swine caused no illness but instead produced a very solid immunity.<sup>13</sup> This observation with swine influenza virus formed the basis for later large scale immunization experiments in ferrets and mice with both the swine and human viruses, and these in turn paved the way for the development of the human influenza virus vaccines currently recommended in human medicine.

It is apparent from what I have written so far that work with swine influenza has led to certain very definite advances in our knowledge of human influenza and that the viruses involved in the two diseases are strikingly similar in all of their characters that can be compared experimentally. Unfortunately, it is impossible to make the comparison entirely complete because there are a number of things that one can do with swine influenza in swine but would hesitate to carry out with human influenza in man. For instance, while it is clearly established that both the virus and the bacterium, *H. influenzae suis*, are etiologically essential in swine influenza, it is by no means evident that a similar complex etiology is involved in human influenza. My own feeling is that in the relatively mild interpandemic influenza of the type that we have at roughly two-year intervals, bacteria play a minor role in enhancing the pathogenicity of the influenza virus. On the other hand, in pandemic influenza of the lethal type that occurred in 1918, it seems likely to me that an etiologic set-up of virus plus bacterium may prevail as it does in swine influenza. As mentioned earlier, the possibility exists that swine originally acquired their influenza from man during the 1918 pandemic. If this is indeed the case, then the swine influenza virus represents a surviving prototype of the human pandemic virus and might be expected to differ in certain rather definite ways from the current human interpandemic virus. I have indicated that the swine influenza

virus and current type A human strains are very similar immunologically; with regard to their pathogenicity for ferrets, mice and embryonating hens' eggs; and also with respect to their more abstract measurable characteristics. However, when the pathogenic properties of the two viruses are compared in swine, rather striking differences may be noted and these differences are most apparent when *H. influenzae suis* is concomitantly present. If swine are infected intranasally with either swine or human influenza virus alone, only a very mild, usually afebrile illness results; that caused by the human virus is indistinguishable clinically from that caused by the swine virus. If, on the other hand, *H. influenzae suis* is mixed with the viruses as they are administered intranasally to swine, characteristic severe swine influenza results in the animals receiving the swine virus, while in those receiving the human virus one of two things may ensue: (1) either the animal will come down with a febrile respiratory illness resembling mild swine influenza, or (2) it will develop only a mild "filtrate disease" like that seen in swine infected with virus alone.<sup>14</sup> It can be shown by bacteriologic studies at autopsy that in the first instance *H. influenzae suis* became established with the virus in the swine respiratory tract, while in the second the bacterium failed to establish with the human virus.

The interpretation placed upon experiments of this type is that the current human influenza viruses are less capable of setting up concomitant respiratory tract infections with a bacterium, and that even when they do they are less capable of acting synergistically with the bacterium than is the swine influenza virus. Furthermore, though swine influenza is highly contagious, the disease caused in swine by human influenza virus and *H. influenzae suis* does not regularly transmit by contact.<sup>14</sup> These differences in the two viruses might readily constitute the differences between agents responsible for clinically severe pandemic influenza, in which bacteria may play a role in enhancing the disease, and milder interpandemic influenza in which bacteria may play a minor or negligible role. The question of whether or not the swine influenza etiologic complex may accurately reflect that of human pandemic influenza has been fully discussed in a previous publication.<sup>15</sup>

Much more could be written concerning swine influenza to show its role relating to human medicine, but I believe a sufficient amount has been set down to demonstrate that this disease of hogs, by blazing the trail on a number of occasions for investigators of influenza of man, has made a

definite contribution to human health and well-being.

#### BOVINE PSEUDORABIES

Bovine pseudorabies may be defined as an acute, highly fatal, infectious disease of cattle caused by the pseudorabies virus. The disease is known popularly throughout the Middle West where it is most prevalent as "mad itch" because of its cardinal clinical feature, an extreme pruritus in which the animals mutilate an area of skin somewhere on their bodies by persistently licking and biting at the affected area.<sup>16</sup> Death always ensues, usually within thirty-six to forty-eight hours of the time the animal is first noticed to be affected and is the result of a bulbar paralysis. The virus in cattle is strictly neurotropic. As a rule only a small portion of a herd is involved, and it is not uncommon to observe single cases in rather large groups of animals. Bovine pseudorabies never reaches epizootic proportions, and long periods of time may elapse between the appearance of individual cases in a community. The disease has no recognized seasonal incidence, and many farms, even in areas where it is known to be enzootic, escape infection entirely.

The epidemiologic facts as I have just outlined them suggested that pseudorabies was not contagious in cattle and that a secondary host of some sort must be responsible for its dissemination. This proved to be the case, and while the epidemiologic set-up as it was finally worked out has no known analogue in human medicine (so far as I am aware), certainly in human medicine the phenomenon of isolated cases of serious disease appearing apparently from nowhere (as is the case in pseudorabies of cattle) is not unknown. It is because the epidemiologic pattern found to prevail in bovine pseudorabies may be of potential application to certain as yet unsolved epidemiologic problems of human medicine that I wish to include a brief discussion of it in this paper. Aspects of bovine pseudorabies, other than its epidemiology, are little if any different from those of other neurotropic virus diseases of animals or man.

In working with the virus shortly after it had been recovered for the first time in this country from a natural outbreak among cattle in Johnson County, Iowa,<sup>17</sup> it was found that swine were susceptible to infection; this observation furnished the key to our present understanding of the epidemiology of the disease in cattle. Pseudorabies in pigs was found to be quite different from that in any of the other animal species studied. Instead of regularly killing, as it did in cattle and

all of the small laboratory animals, pseudorabies virus caused an extremely mild and almost "silent" infection in swine. Aside from a transient temperature elevation, swine showed few clinical manifestations of infection. Furthermore, pseudorabies in swine proved to be highly contagious in contrast to its noncontagiousness in cattle and other experimental animals.<sup>18</sup> Its mild but highly contagious character suggested it as an ideal reservoir infection. It was found that transmission from swine to swine was by way of the nasal passages and that virus persisted in the noses of infected swine for as long as ten days. Pseudorabies could be transmitted from swine to rabbits merely by bringing the noses of infected swine into contact with abraded areas of skin on rabbits. To one familiar with the behavior of swine when they are with cattle it seemed likely that a virus present in and on the nose of a hog could be readily transferred to the skin of a cow, because cattle lying around a barnlot in which hogs are also kept come frequently into contact with the pig's noses.

In observing natural outbreaks of bovine pseudorabies on Iowa farms it was noted that all cases occurred on farms where swine and cattle were kept together. In two outbreaks where the matter was studied it was found that neutralizing antibodies for pseudorabies virus were present in the sera of swine that had associated with the infected cattle. This indicated that the swine had undergone a previous infection with pseudorabies though the owners had not noted the swine to be ill. All of the evidence indicated that the swine on these farms served as the source of infection for the cattle with which they were associated.

The finding that outbreaks of pseudorabies had occurred in the swine herds on the farms referred to above without the owners' knowledge suggested that the disease might be a widespread one in swine though undetected because of its mildness. To obtain some conception as to its possible incidence, pooled serum samples from large groups of middle western swine were studied for their content of pseudorabies virus-neutralizing antibodies.<sup>19</sup> The results obtained were surprising in that they indicated an incidence of infection of 5 to 50 per cent among the various groups of swine studied. While the data were only approximate, they indicated that porcine pseudorabies was indeed a very prevalent disease in the Middle West. Similar studies of sera from groups of Eastern swine failed to reveal pseudorabies virus-neutralizing antibodies, nor is bovine pseudorabies known to occur in the East. With such a high incidence of pseudorabies infection among middle western swine, it is sur-



prising that the disease does not spread to cattle more often than it does.

The epidemiologic set-up of pseudorabies as it occurs naturally in the Middle West is of potential interest to human medicine because it supplies at least one pattern to explain the occurrence of scattered sporadic cases of serious disease in a host in which that disease is clearly not contagious. In bovine pseudorabies there is no continuity of infection from case to case, and the cow actually represents the "end of the line" for the pseudorabies virus. Each bovine case naturally occurring probably terminates the career of the virus responsible for it and, were it not for its reservoir porcine host, pseudorabies would not progress beyond the first cow it infected. It is a rather peculiar situation to have a disease occurring in really epizootic proportions in one host in which it is unrecognized and almost completely "silent" (a silent epizootic, so to speak) and be detected or recognized only on the rare occasions when it "leaks" to a host for which it is lethal. I feel quite certain that if pseudorabies were limited to swine we would today be unaware of its presence in the Middle West. Only when its virus invades cattle do we know that it is about. It would be unusual for Nature to create a model for disease dissemination as intricate as this one for pseudorabies and not use it again. On the chance that it may be used in some as yet unraveled mystery of human medicine, I have included this brief outline of the story of bovine pseudorabies by way of pointing out a possibility.

#### RABBIT PAPILLOMATOSIS

Rabbit papillomatosis is a virus disease of cottontail rabbits (genus *Sylvilagus*). Infected animals have warty growths on various parts of their bodies, and both grossly and histologically these growths have the appearance of papillomas. The disease has probably been prevalent in the Middle West for many years. Professor J. E. Guthrie of Iowa State College reported its presence in three western Iowa counties to the Iowa Academy of Science in 1919<sup>20</sup> and in his paper stated that his attention had been first called to the condition about twelve years previously. According to Guthrie, it had been described from Nebraska by Barbour in 1901. Guthrie did no experimental work with the disease, but he did submit one of the growths to the Pathological Division of the Bureau of Animal Industry of the United States Department of Agriculture at Washington for examination and was told that "these corneous developments are congenital malformations of dermal origin."

My attention was called to the disease in 1932 and material was obtained from a case in Cherokee County that summer. The disease proved to have a virus as its causative agent, and this virus is present only in the growths and not elsewhere in infected rabbits.<sup>21</sup> The virus is experimentally transmissible to domestic rabbits (genus *Oryctolagus*) and in this species induces papillomas similar to those occurring under natural conditions in cottontails. While the virus is transmissible in series in wild rabbits, it cannot usually be carried beyond its first experimental passage in domestic rabbits, though by indirect means it can be shown to persist in the growths it has induced in domestic rabbits.<sup>22</sup> The interest of rabbit papillomatosis to human medicine, and therefore its relationship in the sense of this paper, lies in the fact that in domestic rabbits the growths produced by the papilloma virus undergo malignant change and progress to invasive papillomas, frankly malignant papillomas, or squamous cell carcinomas.<sup>23</sup> Metastasis is frequent, and some of the cancers have proved transplantable. This disease of the lowly cottontail has thus furnished us with a potentially valuable tool for use in attempting a better understanding of the cancer problem, especially that part of the problem relating to etiology.

There is not space in a summarizing paper like this one to detail the relationship of the rabbit papilloma problem to cancer, but to those who may desire a general discussion of the matter two papers by Rous<sup>24, 25</sup> should prove of lively interest. I merely want to point out briefly some of the ways in which findings with the rabbit papilloma virus may bear on the little understood problem of cancer in general.

Papillomatosis as it occurs under natural conditions in cottontail rabbits is obviously an infectious disease. From one area in Kansas where we have had large numbers of rabbits trapped for us it has been a common experience to find between 10 and 20 per cent of the animals affected. This high incidence indicates that the causative virus spreads with ease and alacrity among a susceptible population—quite the opposite of the situation known to hold among true malignancies.

The growths developing in domestic rabbits as a result of infection with papilloma virus, however, run a course and possess characteristics more in keeping with those generally considered typical of true malignancies. Papillomas develop in inoculated domestic rabbits just as they do in wild rabbits. They grow progressively larger and may become huge even though remaining benign by ordinary criteria. At this stage they have a sim-

ilar appearance to the naturally-occurring wild rabbit papillomas but differ from them in one important respect, that of infectiousness. Whereas the wild rabbit papillomas yield a virus capable of causing papillomatosis in either wild or domestic rabbits, the papillomas of domestic rabbits are usually not infectious.<sup>21</sup> The frequently invoked objection to the eligibility of certain so-called "virus tumors" for consideration as neoplastic processes, raised on the grounds that a causative agent distinct from the proliferating cells can be discriminated, is thus invalid in the case of the papilloma in domestic rabbits. If the first case of papillomatosis studied had been one in a domestic rabbit, I feel certain that the investigator would have reached the conclusion that he was dealing with one of that large group of so-called "spontaneous" mammalian tumors that were nontransmissible and but occasionally transplantable. He probably would not even have suspected that the papillomas had been caused by a filtrable virus from an entirely foreign animal genus.

Fortunately we are not in the predicament of our hypothetical investigator because we know, from having actually performed hundreds of inoculation experiments, that the papillomas of domestic rabbits arise as a result of the introduction of papilloma virus of wild rabbit origin into the very sites of skin from which the papillomas subsequently arise. Furthermore, there are other means of an indirect nature involving the use of immunologic reactions,<sup>22</sup> whereby it can be shown that virus is present in the domestic rabbit warts but is not directly demonstrable because its infectivity is masked in some obscure fashion.

After a variable period papillomas in domestic rabbits attain to a malignant state, cancers appearing in the neoplastic mass. Rous<sup>24</sup> states, "The cancers may be cystic, invasive papillomas or papillomas of complicated pattern, especially at first, but later they usually become frankly malignant papillomas or squamous cell carcinomas, these being sometimes completely anaplastic."

As in the case of benign papillomas of domestic rabbits, virus is not directly demonstrable in the cancers. However, the presence of virus in a masked form can be demonstrated in the malignant growths just as it can be in the benign ones. Some of the cancers have proved transplantable in series and an agent possessing the immunogenic properties of the papilloma virus has persisted in the malignancies throughout their serial passages.<sup>26</sup> It increases in amount as the transplanted tumors increase in size and causes the animal host to react by forming an antibody capa-

ble of neutralizing fully infective papilloma virus of wild rabbit origin. There is every evidence to indicate that the papilloma virus persists in the malignancies deriving from the benign growths it engenders and that it is the actual causative agent in the malignant tumors just as it is in the benign ones. Experimental findings in support of this have been presented by Rous and his co-workers in a large series of papers and the evidence has been summarized in two recent papers.<sup>24, 25</sup>

Thus we have in rabbit papillomatosis an example of a virus which in one species of animal, the wild rabbit, causes an ailment that behaves like an infectious disease but whose clinical manifestations are those of a tumor, and in another species, the domestic rabbit, causes a condition which is not infectious (in the usual sense) once it is established in that species but which has most or all the ear marks generally considered typical of the so-called "spontaneous" tumors of mammals. In both species the papillomas are clearly engendered by a virus, but in the case of the domestic rabbit, once the growths have been incited, the virus fades from the picture as a tangible, directly demonstrable etiologic entity though it apparently persists and exerts its neoplastic effect throughout the entire course of the disease. Papillomatosis in domestic rabbits with its subsequent progression to malignancy thus furnishes a clear instance in which a virus serves as a carcinogen. It does this under conditions which might be etiologically as obscure as they are in many other mammalian malignancies were it not for the fortunate circumstance of knowing this particular virus' activities in another species in which it possesses all of the characteristics of an infectious agent. Because the study of rabbit papillomatosis has elucidated this possibility and has indicated a clear-cut set of circumstances in which a virus can serve as the cause of an epithelial neoplasm analogous in many respects to carcinoma of unknown etiology, it has served a potentially useful purpose in medicine. Naturally, no one believes that cancer etiology can be reduced to the relatively simple terms of the malignancies developing in rabbit papillomatosis. However, since the cancer problem is admittedly a very complex one, any simplification by way of demonstration of the cause of one type, even though it is only in rabbits, is a step in the right direction. Rous concisely summarized what seems to be a sensible view to hold concerning the relationship of viruses to tumors when he wrote,<sup>24</sup> "Yet so little is known concerning tumors that it is still possible to conjure up a legion of causes for them



as large as the imagination. But save for the viruses, this legion is shadowy. The viruses are actual workmen in the cellular world."

### CONCLUSION

This concludes my account of three animal diseases prevalent in Iowa. I hope that during the course of the discussion it has been made apparent that a study of each has, in some manner, made a contribution to human medicine. I would not go so far as to contend that their contributions to our knowledge justify their existence, but I do think it would be a shame, since we have them whether we like it or not, not to utilize them to the fullest extent in gaining valuable information that cannot be gotten directly by studying human disease in man. This procedure at least elevates them to the category of "mixed blessings" for the state and world.

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## CONGENITAL CYSTIC MALFORMATION OF THE LUNG

### Differential Diagnosis and Pathologic Characteristics in Twenty-one Cases\*

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Congenital cystic malformation of the lung was once believed to be an uncommon lesion. This was largely due to the fact that it was mistaken for a number of other pathologic conditions of the lung, and it was therefore not recognized until resection of the lung became commonplace and the lesion was found in the surgical specimen. In spite of the recognition of pitfalls in diagnosis as reported by various authors<sup>1, 2, 3, 4</sup> the differentiation from a number of intrathoracic lesions frequently presents a difficult problem.

The present study is based on an experience with twenty-one patients, eighteen of whom developed symptoms only after the cyst had become infected and the remaining three when intrathoracic pressures had been disturbed. The patients were fairly evenly distributed over ages up to 25 years, and the duration of symptoms varied from a few days to approximately twenty-five years. Of the twelve patients in whom a resection was made, the location of the lesion was fairly evenly divided in various lung lobes. However, in no case was either upper lobe alone involved. In nine nonresected cases, the cysts were located in the right lung in six and in the left in three patients. In a review of twenty-six reported cases by nine authors the age distribution, duration of symptoms, and location of the lesion were approximately the same as in the present series.

The gross pathologic picture in the twenty-one cases studied was classified as follows: (1) those which presented multiple cysts and with a considerable amount of normally functioning lung; (2) those with multiple cysts but with little or no normally developed lung being present; (3) those which presented a large amount of abnormally de-

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veloped bronchial tree elements, a number of smaller cysts and with little or no normally developed terminal respiratory units. This is an arbitrary classification based on the degree of involvement. The records of patients presented illustrate that at times this factor had considerable influence on the clinical course as well as the overall pathologic picture.

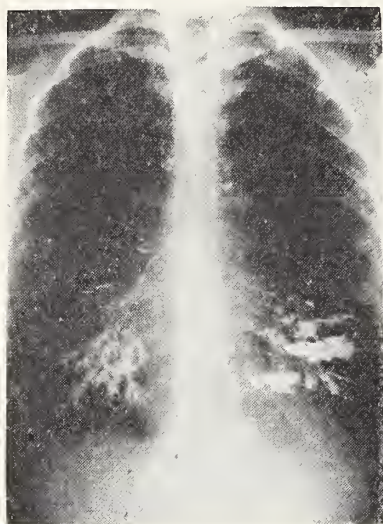


Fig. 1-a. Bronchogram showing characteristic picture of bilateral bronchiectasis in a 25 year old female who had had a productive cough for twenty-four years.

Microscopically viewed, the cysts were lined by columnar ciliated epithelium except when as a result of metaplasia it had been replaced by squamous epithelium or had been entirely destroyed by infection. The cysts were surrounded by a variable amount of fibrous connective tissue with bronchial wall elements such as cartilage, glands, and smooth muscle being present in some regions. Outside of the cystic areas many small air passages lined by cuboidal or low columnar epithelium were present. The amount of this type of abnormal development varied considerably in the sections of different patients. When infection had been present throughout the lung the usual changes characteristic of pneumonitis, such as round cell infiltration, macrophages, and plasma cells, were present. The influence of diffuse chronic pneumonitis on the clinical picture as well as the diagnostic problem will be discussed in more detail under that heading.

The diagnosis of congenital cystic malformation of the lung is usually not difficult when its possibility is kept in mind. Although the clinical manifestations are produced either by alteration of intrathoracic pressures due to a check valve type of communication with the tracheobronchial tree

or by the development of infection, the clinical picture of a number of intrathoracic conditions may be simulated by this malformation. In the present study of twenty-one patients the following lesions were diagnosed: (a) bronchiectasis, 13; (b) lung abscess, 7; (c) empyema, 4; (d) tuberculosis, 4; (e) pneumothorax, 3; (f) pneumonitis, 2; (g) diaphragmatic hernia, 2; and (h) chronic bronchitis, 1. In the collected cases reported, the experience of the authors was very similar. The various conditions diagnosed before the true nature of the lesion was discovered were as follows: (a) bronchiectasis, 4; (b) lung abscess, 2; (c) empyema, 4; (d) tuberculosis, 2; (e) pneumothorax, 1; (f) pleuropericardial cyst, 1; and in eleven cases no diagnosis was given before operation. In a number of our own cases as well as in those reported by others treatment had been instituted for one or more of the above conditions before the true nature of the lesion was recognized. The following case reports are representative of the difficulties in differential diagnosis.

*Bronchiectasis:* P. R., a white female 25 years of age, complained of a productive cough with intermittent attacks of fever over a period of twenty-four years. She had had whooping cough at the age of one year and had developed pneumonia



Fig. 1-b. Large microscopic section of right middle lobe showing numerous cystic spaces and no normal lung tissue.

during her second pregnancy. Examination revealed a poorly nourished, chronically ill individual who coughed considerably during the procedure. Many râles were heard in both bases. X-rays following iodized oil injection showed the characteristic picture of bilateral bronchiectasis.



On bronchoscopy a purulent exudate was seen coming from the bronchus of all lobes (fig. 1a). A diagnosis of bilateral bronchiectasis was made, and the patient was prepared for operation. A resection of the right lower and middle lobes was carried out by the dissection technic. Her postoperative course was uneventful. Her symptoms were decreased to approximately one-third of the original severity and her general condition was good. Examination of the surgical specimen showed the lesion in the lower lobe to be saccular bronchiectasis. The right middle lobe was found to be made up entirely of cystic areas, however. Microscopic sections of this lobe showed the characteristic picture of cystic malformation of the lung (fig. 1b and c). Approximately seven months following the above operation the left lower lobe and lingula were resected. The patient made a good recovery and has been relieved of her symptoms.

This patient presented the usual history and findings of bilateral bronchiectasis, the true nature of the lesion in the middle lobe being found only after the surgical specimen was examined. One might speculate as to whether infection of the cyst in the middle lobe had led to the development of bronchiectasis in the lower lobes due to repeated contamination by internal drainage.

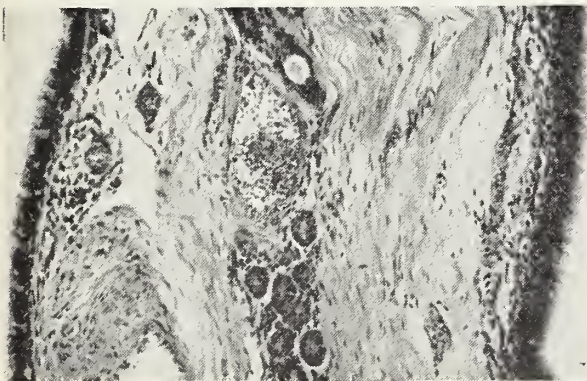


Fig. 1-c. High power through cyst wall showing columnar ciliated epithelial lining, glandular tissue and fibrous connective tissue.

In three other patients of the group under study, the middle lobe only was involved by the malformation. In these cases there was no infection in the lower lobes and on iodized oil injection showed dilated spaces in the middle lobe only. From our experience with the present group of cases it would seem that when only the middle lobe is involved by a suppurative process, cystic malformation should be suspected rather than primary bronchiectasis. In patients with middle lobe involvement, internal drainage of secretions

into the lower lobes may produce a picture on bronchography suggestive of tubular bronchiectasis and thus lead to the resection of normal lung tissue. At times it may also suggest that the bilateral involvement is too severe for operation to be advisable. In the three above mentioned

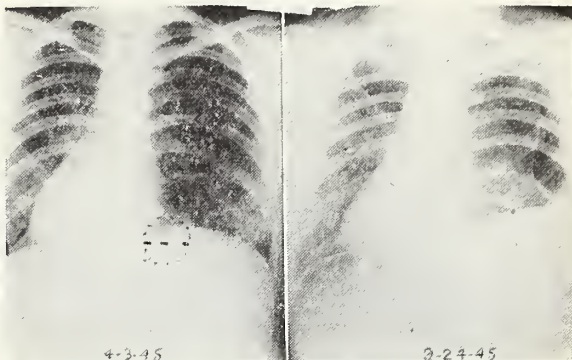


Fig. 2-a and b. X-rays of chest before and after resection of right lower lung lobe in a 19 year old boy who had had a cavity in that location draining since twelve years previously. A fluid level is seen in fig. 2-a at the cardiophrenic angle just beneath the dome of the diaphragm. The upper and middle lobes are not entirely expanded as seen in fig. 2-b.

patients, the middle lobe was resected followed by complete relief of symptoms.

**Lung Abscess:** An 18-year-old white male complained of having had pneumonia at the age of five years. Following this, a lung abscess developed and was drained through the chest wall. After a period of time the drainage tube was removed. The symptoms of productive cough and sepsis returned, however. The abscess cavity was again drained and allowed to close on three successive occasions. The last drainage tube had been in place for approximately twelve years when the patient was first seen in this clinic. During this period he had developed normally and had no complaints other than the presence of the draining sinus.

Physical examination revealed a healthy appearing obese boy with a large tube draining a sinus at the base of the right lung posteriorly. On removing the tube, a smooth lined cavity approximately two to two and one-half inches in diameter was visible. Several bronchial fistulae were demonstrable. X-rays following injection of the sinus with iodized oil showed a fluid level just below the dome of the diaphragm (fig. 2a). The diagnosis of congenital cystic malformation of the lung was made and the right lower lobe was resected. The postoperative course was uneventful.

The surgical specimen showed a large cyst involving approximately one-third of the lower

lobe, the remainder of the lobe being largely airless. A microscopic section through the larger portion of the lobe showed much of the lung abnormally developed. The cyst was lined with columnar ciliated or stratified squamous epithelium (figs. 2c, d, and e).

In patients having chronic pneumonitis surrounding cystic areas, the diagnosis of lung abscess is a common error. In such cases after drainage of the cavity the space does not become obliterated. If a biopsy is not taken, the true

nature of the disease may remain unrecognized and a number of operations may be made in trying to heal the lesion. In such cases the history should arouse one's suspicion of the possibility of the condition. When the correct diagnosis is made, operative treatment should consist of excision rather than drainage unless contraindicated by the patient's general condition. Next to bronchiectasis, lung abscess had been diagnosed most frequently in the present series of cases prior to recognition of the true nature of the lesion.

*Empyema:* A white female 2½ years of age was admitted complaining of some difficulty in breathing and a productive cough of two months' duration. She had also had some elevation of temperature during this period. Examination revealed an underdeveloped and undernourished sickly child whose right chest was dull to flat over the lower three-fourths of the lung. A few râles were heard at the apex. Breath sounds were diminished or absent over the greater portion of the right side. The white count was nineteen thousand. X-rays of the chest revealed complete opacity in the lower two-thirds of the right lung. An empyema or a lung abscess was suspected. Frank pus was obtained on thoracentesis. After aspiration of pus and introduction of air a large spherical space was demonstrable on x-ray (figs. 3a, b, c). An empyema was then diagnosed and drainage was recommended. At operation after resecting a piece of rib the cavity was entered. However, the wall did not appear to be that of inflamed pleura; thus, a biopsy was taken. This showed the condition to be a large cyst of the right lower lobe lined by columnar ciliated and stratified squamous epithelium. After the cyst had drained for a period of approximately two years, resection of the right lower lobe was carried out without event (fig. 3d).

As pointed out by Maier and Haight<sup>1</sup> large infected cysts of the lung are commonly erroneously diagnosed as empyema. In some cases x-rays following diagnostic pneumothorax may be helpful in differential diagnosis in that the limits of the cavity may appear to be more rounded than is usually the case in empyema. Also at operation the tissue outside of the cavity does not appear to be inflamed in that it is less rigid than is the case in the wall of an empyema. A routine biopsy of the wall is usually diagnostic. Since this diagnosis is usually made in infants or small children, drainage of the cyst prior to resection may frequently be the treatment of choice. However, a correct diagnosis is necessary for determining prognosis and the planning of further care. In most reported cases the diagnosis has been made following drainage of



Fig. 2-c. Surgical specimen showing multiloculated cyst.



Fig. 2-d. Large microscopic section through cyst and showing abnormally developed lung tissues surrounding.



the lesion, and resection of the lung has been made at a later date.

**Pulmonary Tuberculosis:** A 50 year old colored male complained of a productive cough and fever of several years' duration. There was no

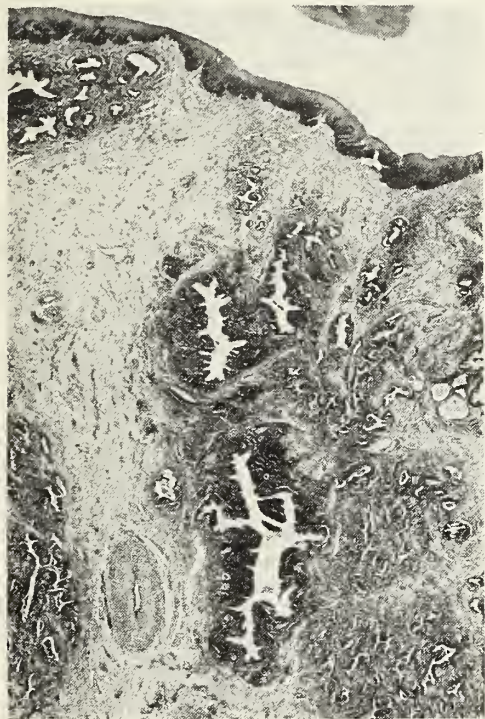


Fig. 2-e. High magnification of cyst wall surrounded by abnormally developed lung tissue. Squamous epithelium lines the large cavity.

history of night-sweats or hemoptysis. On some occasions he had become dyspneic and had experienced pain in the left chest. Examination revealed a chronically ill-appearing individual who coughed considerably during the procedure. Many coarse râles were heard over the left chest, and bronchial breathing was marked in the lower half posteriorly. X-rays showed marked opacity with cavity formation in the lower three-fourths of the left lung. Following iodized oil injection several large cavities were demonstrable in the lower left lung and a number of smaller loculations in other parts of the same side (figs. 4a and b). Examination of the sputum showed several organisms suspicious of tubercle bacilli, and for a time pulmonary tuberculosis was strongly considered. Repeated examinations of the sputum were negative for tubercle bacilli, however, and drainage of the lower cavities was planned. The patient's condition improved, and the operation was postponed. Because of the patient's age and general disability, resection of the involved lung was thought in-

advisable. He has been seen at infrequent intervals during the past eight years and has continued to have a negative sputum for acid fast organisms and has a moderately productive cough but without causing undue handicap. The final diagnosis was congenital cystic malformation of the left lung.

Four of the present series of cases and two of the reported cases had been treated for pulmonary tuberculosis before the true nature of the lesion was recognized. When the possibility of cystic malformation is kept in mind, however, this error in diagnosis is much less likely. Three of the patients had been seen a number of years ago before congenital cystic malformation of the lung was well known. In patients having a productive cough with x-ray evidence of a cavity presenting a fluid level, a repeatedly negative sputum for tubercle bacilli should rule out the diagnosis of pulmonary tuberculosis.

**Spontaneous Pneumothorax:** A 3 year old colored female was admitted complaining of a mild productive cough, fever and dyspnea of one month's duration. Shortness of breath had not been extreme at any time, and the amount of sputum raised was rather small. Examination revealed a normally developed child of three who did not appear ill. Positive findings were limited to the chest. Râles were heard in both lungs and

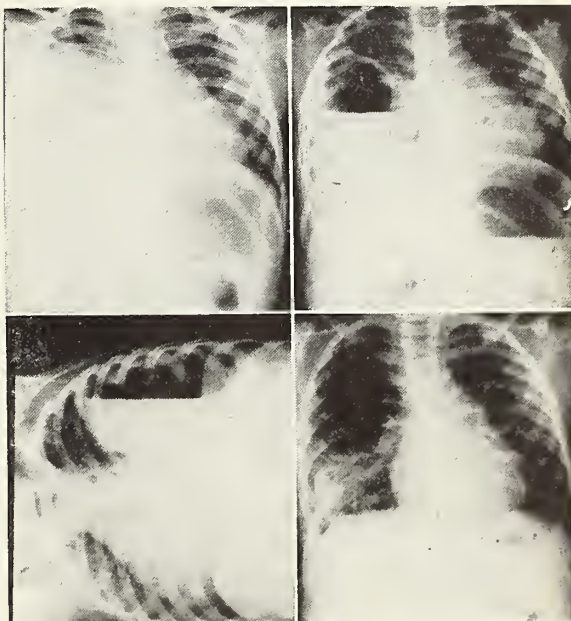


Fig. 3-a, b, and c. Three x-ray views of chest of a 2 year old girl having the symptoms and findings suggesting empyema following pneumonia, b and c showing fluid level after aspiration of pus and injection of air into the cavity. d. X-ray following drainage of cavity, a biopsy of the wall showing it to be a congenital cyst of the lung. Resection of the right lower lobe was made subsequently, the patient having an uneventful postoperative course.



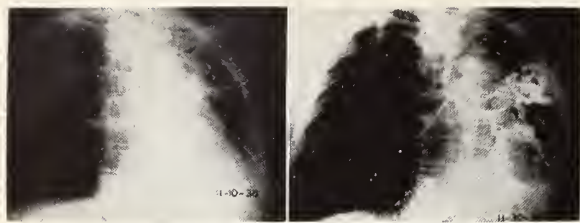


Fig. 4-a and b. X-rays of the chest before and after injection of iodized oil in 59 year old man giving a history of a productive cough for many years. Note various sized cavities throughout the left lung. The persistent absence of tubercle bacilli in the sputum makes the diagnosis of congenital cystic malformation most probable.

there was dullness in the lower part of the right side. Breath sounds were diminished or absent over the upper two-thirds of the right lung. On x-ray examination the right lung appeared to be almost completely collapsed by a spherical shaped space filled with air. The mediastinum was not shifted (fig. 5). The diagnosis was a spontaneous pneumothorax. Further examination revealed no evidence of other lesions, and the tuberculin test was normal. Manometric readings showed approximately atmospheric pressures within the air space, the pressure decreasing on inspiration and increasing on expiration. After removing several hundred cubic centimeters of air from the space, the pressures were unchanged. Fluoroscopic examination showed the space to be the same size as before the aspiration.

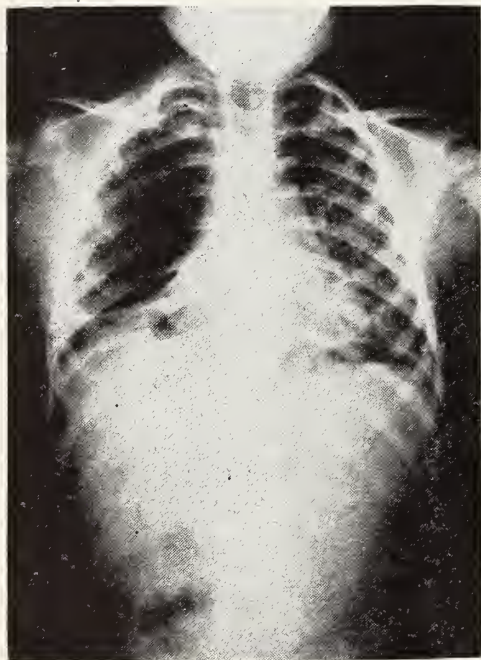


Fig. 5. X-ray of chest of 3 year old colored girl having a productive cough and some dyspnea. Note ovoid shaped air-filled space before and after the removal of several hundred cubic centimeters of air. The condition has remained unchanged for a period of ten years.

On closer inspection of the x-rays, it was seen that the outline of the air-filled space was oval in shape. Both at the apex and at the base there was a continuous border encircling this ovoid space. This suggested that the space was within the lung with a very thin shell of lung surrounding it. Therefore a diagnosis of congenital cystic malformation of the right lung was made.

The patient has been seen at infrequent intervals during the subsequent ten years, and her condition has remained essentially the same. Operative removal of the cyst has been advised and rejected.

Pressure symptoms produced by large cysts of the lung usually occur in young children or infants. In former years a number of these cases have

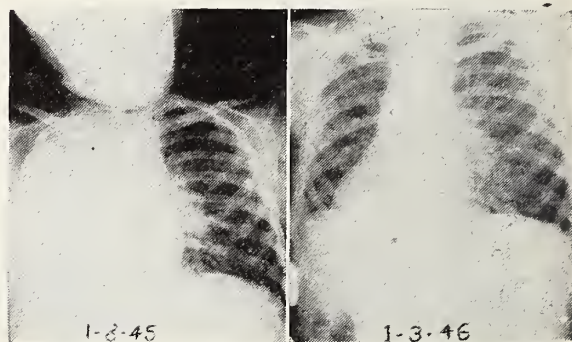


Fig. 6-a and b. X-rays of chest of 8 year old white boy before and after resection of left lower lobe. A productive cough, fever, and hemoptysis had been present for one year.

probably been diagnosed as spontaneous pneumothorax, and when complete examinations were not made the true nature of the condition went unrecognized. Four of the present series studied, whose symptoms were produced by intrathoracic pressure changes, were three years of age or less, one being only twelve days old. The differential diagnosis can usually be made by establishing a pneumothorax, thus demonstrating the cyst wall, or by the injection of an opaque media such as iodized oil into the cystic space and visualizing the outline of the cyst wall and trabeculae on x-ray examination. If it is otherwise impossible to diagnose the case, a biopsy through the chest wall will usually show columnar ciliated or stratified squamous epithelium. In some cases the x-ray appearance of the spherical outline may be highly suggestive of the presence of a large cyst, but this is not conclusive. If the condition persists unchanged for a long period of time, however, cystic malformation of the lung is the most probable diagnosis.

*Chronic (Diffuse) Pneumonitis:* An 8 year old white male was first seen complaining of a



productive cough with intermittent hemoptysis and fever for approximately one year's duration. The patient gave a history of bilateral pneumonia with surgical drainage of bilateral empyema during the earlier part of this period. On examination he appeared chronically ill and was somewhat dyspneic. The entire left lung was dull to flat, and breath sounds were either absent or bronchial in character. The right lung was normal. Laboratory findings included hemoglobin, 10 gm.; red blood count, 3.9 million; and white blood count, 14,000. X-rays showed the left lung to be entirely airless with a slight deviation of the heart shadow toward the right side (fig. 6a). Following the injection of iodized oil, only the primary bronchi of the upper and lower lobes were outlined. On bronchoscopic examination a moderate amount of foul pus exuded from the left main stem bronchus and an especially large amount from the left lower lobe. The right side was clear. The differ-

although the upper lobe could not be re-expanded, it was left in place.

Following operation the patient made a very uneventful recovery. However, the upper lobe



Fig. 6-c. Gross appearance of left lower lobe showing numerous cystic spaces and malformation of lung tissue, the cysts being lined in part by a stratified squamous epithelium.



Fig. 6-d. Microscopic appearance of left lower lobe. See fig. 6-c.

remained completely atelectatic for a period of approximately four to six weeks then became inflated spontaneously (fig. 6b).

On cut section the surgical specimen revealed



Fig. 6-e. High power microscopic view of left lower lobe. See fig. 6-d.

ential diagnosis included massive empyema, chronic suppurative pneumonitis with abscess formation, and possibly bronchiectasis. Pneumonitis, however, was thought to be the most likely cause of his trouble. A thoracentesis revealed no evidence of pus in the pleural cavity. Therefore, after preparation of the patient for operation by several transfusions aggregating a total of 1900 cc. of whole blood and postural and bronchoscopic drainage as well as chemotherapy, an exploration was made. The left upper lobe was found to be completely atelectatic but not infiltrated or otherwise abnormal. The left lower lobe was diffusely infiltrated and airless, but no large cystic spaces could be identified. The lower lobe was removed by the dissection technic, and



several cavities filled with frank pus. The remainder of the tissue consisted of markedly fibrosed and consolidated lung. On microscopic examination the walls of the spaces were lined by columnar ciliated or stratified squamous epithelium, and various elements of the bronchial wall

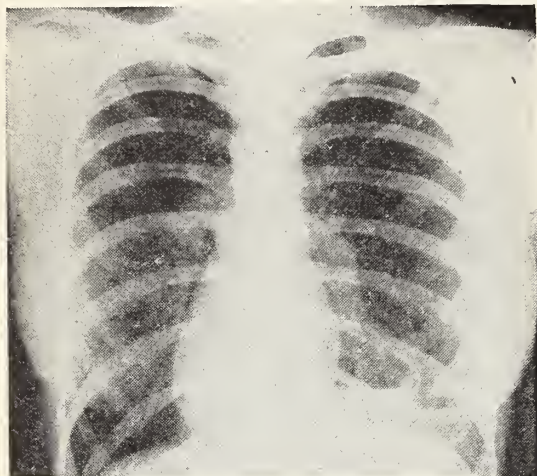


Fig. 7-a. X-ray of chest of a 17 year old girl who had repeated attacks of upper respiratory infection for one year. Note cystic areas with fluid levels in base of right lung.

were present. In the remainder of the lung, abnormal development of the various lung elements were present such as numerous small spaces lined by cuboidal epithelium and a lack of normally developed terminal respiratory units. The degree of infection was not as great as suspected from gross examination of the tissue (figs. 6c, d, and e).

In patients with a pathologic process such as the above described, it is frequently impossible to differentiate between a chronic pneumonitis and other pathologic lesions. A history of an insidious onset of a pulmonary suppurative process in a child without the usual etiologic factor for the production of bronchiectasis or lung abscess should strongly suggest the possibility of congenital cystic disease. Bronchoscopic examination and x-rays following iodized oil injection are usually not diagnostic. In such cases when the patient's condition warrants it and a thorough preparation for operation has been made, exploration and resection of the involved portion is indicated.

The surgical specimen contained two large and several small multiloculated cystic spaces which were almost completely surrounded by normally developed and inflated pulmonary tissue. Microscopic examination revealed columnar ciliated and stratified squamous epithelium lining the cystic spaces. A considerable amount of fibrous tissue and some abnormally developed respiratory passages were present in the walls of the cyst.

However, approximately one-half to two-thirds of the lung parenchyma appeared to be normally developed (figs. 7b and c).

*Chronic Bronchitis:* A 16 year old white female was first seen complaining of repeated attacks of an upper respiratory infection which produced a chronic cough. This had not kept her from attending school and had not impaired her general health to any considerable degree. Physical examination revealed a well developed and nourished individual who did not appear to be very ill. The general physical examination as well as that of the chest was entirely normal. Fluoroscopy showed no abnormal findings. A diagnosis of chronic bronchitis was made, and the patient was treated with sulfa drugs and cough medicine. She was seen at infrequent intervals and continued about the same with intermittent exacerbations of her upper respiratory infection. Approximately one year later during a recurrence of her symptoms, an x-ray was made which showed two or three spherical cavities demonstrating a fluid level and located in the lower right lung field (fig. 7a). Physical examination at this time revealed a few râles present in the right base but little else to account for the presence of the cystic spaces. The diagnosis was congenital cystic malformation of the lower right lung. At operation the condition was found to be confined to the right lower lobe which was removed by the dissection technic. The patient made an uneventful recovery and has been asymptomatic during the eighteen months' interval since operation.

The above case illustrates that cystic areas may be easily overlooked both on physical and fluoroscopic examination when little or no secretion is present and where normally functioning lung tissue surrounds the cysts. Furthermore, when



Fig. 7-b. Gross appearance of lesion in right lower lobe showing various sized pulmonary cysts and a considerable amount of normally developed lung tissue surrounding.



the cysts are located below the level of the dome of the diaphragm posteriorly, they are not demonstrable on anteroposterior x-ray views of the chest. A mild cough with little sputum may be the only symptoms present. The condition may go unrecognized until infection increases the fluid contents of the cysts. A history of continued cough in children or young adults without obvious cause should be looked upon with suspicion and repeated fluoroscopic and x-ray examination made for evidence of the lesion. Treatment consists of resection of the involved part. The risk of operation is small when the patient is properly prepared.

In the present group of twenty-one patients there were no deaths. Three patients in this study were seen in consultation with Dr. M. M. Shaw and Dr. Ed. Bryant and were treated at the Provident Hospital.

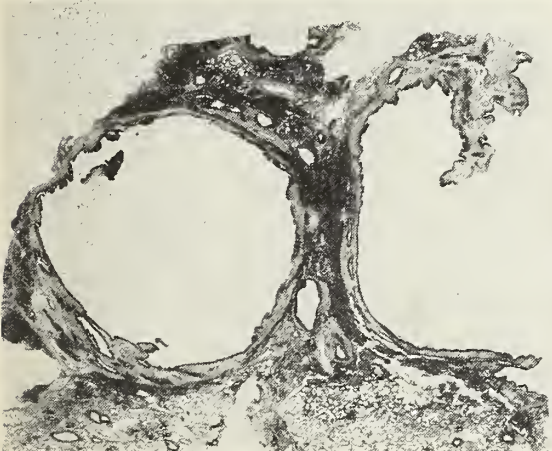


Fig. 7-c. Microscopic appearance of right lower lobe. See figure 7-b.

SUMMARY AND CONCLUSIONS

A review of twenty-one cases of cystic malformation of the lung revealed that a number of pathologic conditions had been diagnosed before the true nature of the lesion was recognized. In several instances treatment had been instituted for one or more of these lesions for periods of over a year. In twenty-six collected cases reported by nine authors, a similar experience was noted. The difficulties in differential diagnosis were based chiefly on the similarity of the clinical course with that of other pathologic conditions of the lung. Although x-ray and fluoroscopic examination remain the best diagnostic methods for differentiation, they are not infallible and must be correlated with the clinical findings. The pathologic diagnosis is important both for an accurate evaluation of the disease and for proper surgical treatment.

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TABLE I  
Congenital Cystic Malformation of the Lung  
Cause of Symptoms

	Authors	Reported
Infection .....	18	19
Pressure .....	3	4
Both .....	0	1
Neither .....	0	2*

\*In both cases hemoptysis was the only symptom.

Sex Distribution

	Authors	Reported
Male .....	10	19
Female .....	11	7

TABLE II  
Congenital Cystic Malformation of the Lung  
Age of Patients and Duration of Symptoms

		Age						
Years		0-1	1-5	6-10	11-15	16-20	21-25	25+
Authors .....	1	4	3	2	2	3	6	
Reported .....	4	2	0	3	6	3	8	
		Duration of Symptoms						
Authors .....	5	5	5	3	0	3	0	
Reported .....	9	9	4	1	2	0	1	

Age of patients whose symptoms were caused by pressure changes.

Authors: 12 days, 1 year, 3 years.  
Reported: Newborn (2), 4th day, 26 year old (spontaneous pneumothorax).

TABLE III  
Congenital Cystic Malformation of the Lung  
Lobes Involved Resected

Unilobar		Multilobar	
Authors Reported		Authors Reported	
Rt. Up. ....	0	Rt. Up. & Mid. 2	1
Rt. Mid. ....	2	Rt. Mid. & Low. 1	0
Rt. Low. ....	2	Lt. Up. & Low. 3	2
Lt. Up. ....	0	Bilateral ....	0
Lt. Low. ....	2	Entire Rt. Lung 0	1
Accessory ....	0		

Non-resected

Authors Reported		Authors Reported	
Rt. Lung ....	6	Lt. Lung ....	0

Previous operation in 24 resected cases in literature.  
Previous drainage .....8 cases  
Previous thoracoplasty .....1 case  
Operation fatality .....1 case  
\*Autopsy and marsupialization.

TABLE IV  
Congenital Cystic Malformation of the Lung.  
Differential Diagnosis

	Authors	Reported
1. Bronchiectasis .....	14	4
2. Lung Abscess .....	7	2
3. Empyema .....	4	4
4. Tuberculosis .....	4	2
5. Pneumothorax .....	3	1
6. Pneumonitis .....	2	0
7. Diaphragmatic Hernia .....	2	0
8. Chronic Bronchitis .....	1	0
9. Pleuropericardial cyst .....	0	1
10. No diagnosis .....	0	11
No. Cases in Each Series .....	21	26

## REFLECTIONS ON MEDICAL EDUCATION

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Vermillion, South Dakota

It is indeed a pleasure to have been invited to submit this article for inclusion in the centennial issue of the JOURNAL OF THE IOWA STATE MEDICAL SOCIETY. It is an especial privilege for me since I have lived elsewhere than in my home state since 1937. My experiences, especially during the last three and one-half years, however, have been so vivid, stimulating, and instructive that I welcome the opportunity of relating certain impressions on medical education.

Having had the rare prerogative of establishing a new medical school during the war and now being engaged in expanding another institution to a four-year medical college is indicative of my interest in the various problems connected with medical education in general. Because of the exigencies during my short period of experience in this field, I have had to work hard to learn some of the fundamentals that most deans of medical schools have learned over a fairly expansive length of time.

Without students who are eager and anxious to learn, no school or college could have any real reason for existing. It is a curious historical fact that even during the so-called flourishing period of the renaissance that to "go to school" was considered beneath the dignity of many "ladies and gentlemen." From time to time one reads of isolated instances of young people who do not want to attend school, but in our modern era the importance of obtaining a college education has been so ingrained into the people of this country that only those who are uneducated themselves would ever suggest that becoming educated, either in a liberal way or being trained for some profession, is unimportant.

Students attending medical colleges are very much alike the nation over, but they are very different from any other group of students. All of them have but one desire, and that compelling urge was summed up very nicely by a freshman student who said recently, "I have wanted to study medicine ever since I've been old enough to know what a doctor was. To me, a physician is one who has reached the pinnacle of professional service. I know from talking to friends of mine who are already in school and who are nearing the completion of their medical course that the study of medicine is plain hard work. But since I know what it will lead to, I am more than willing to put everything I've got into it." This com-

mon ambition, this common bond, automatically makes all medical students members of a fraternity who are imbued with the making of themselves the best possible doctors of medicine.

With these opening remarks relevant to the student body of any medical school, I should like to suggest that medical schools can aid very remarkably toward improving upon the type and proficiency of entering medical students. They can be more careful in their own selection of an applicant on the basis of the past achievements of students from the premedical college involved. It would seem only fair to use a simple formula of bonus and penalty for individual premedical colleges. This is being done in some medical schools, but it should be even more widespread in order to help insure educators that recalcitrant premedical colleges will correct their deficiencies.

Such a plan as suggested above was put into effect at the Southwestern Medical College in Dallas, Tex., the school which I had the privilege of organizing in 1943. A similar plan is being worked out at my present post in South Dakota, and previous experience indicates that such a plan is indeed constructive and worthwhile.

While it is true that all the statistics show that those students who did best in premedicine will do the best in medicine, there are other factors which seem to be desired greatly. The best kind of medical student to admit is one who wishes to study medicine "so bad he can taste it." Unless he does have this burning desire, there is a tendency that he will not only be a mediocre student, but also, if he does graduate, he may not be the kind of doctor that a medical college would prefer as its most valued representative. This kind of student is a friendly individual, he has plenty of steam, he is stable, dependable, trustworthy and sincere, and he has the ability to make his own decisions. Above all, such a student will have a very great interest in people as people. Finally, such an individual must have good health and financial assistance to see his way through the four years of expensive medical education.

Perhaps a word is in order about the stability of a well qualified medical student. His emotional development is probably the most important single consideration toward his health and happiness. Perhaps it would be better to substitute another word for emotion since the connotation that the word carries is sometimes troublesome to many persons.

Probably one of the commonest causes for emotional instability is criticism by "well meaning" friends. In many instances, however, there may be an innate inferiority complex in people which



causes them to react unfavorably to any kind of criticism. Certainly the physician is in a peculiar position to be often criticized either constructively or destructively. Someone has said that criticism may be defined as, "it can be avoided by saying nothing, doing nothing, and being nothing." However true this may be, the student who starts the study of medicine must have a stability of emotion, and he must have a philosophy of life which will not allow any criticism of any undue nature to reflect upon his thinking, his studying, and, later on, upon his own practice of medicine. Without such a stability the young doctor who first "hangs out his shingle" will more often than not find himself in an impossible situation; he may be afraid that he will be judged too harshly by perhaps some older colleague of the same city simply because he himself wishes to practice a modern, advanced, scientific type of medicine.

Students of medicine should also be advised that there is no magic way that one becomes a doctor. Doctors are made, not born. Modern medical science, therefore, is built upon questioning and change. Magic, on the other hand, is based upon tradition and uncertainty. The practice of magic, primitive medicine, had a unitarian or holistic character as compared with modern medicine. For the ancient there was no body and mental disease; there was only disease. Even today it must be admitted that there are some physicians who practice this brand of medicine. It is a vital, important obligation on the part of the faculty of any medical school to see to it that their students are imbued with the modern methods of practice of medicine, which are based upon facts and not upon empiricism.

As Achtley has put it, "Medicine has undergone a revolution—it is certainly more than evolution." Fortunately, the philosophy of the teaching of medicine has become a science, and while one must not lose the art of practice, it perhaps can be relegated to a secondary place in teaching habits. The finest contribution to medical teaching has been the breakdown of the barrier which formerly existed between the so-called pre-clinical "first two years" and the clinical "last two years." It should be obvious to anyone instructing medical students that there can be no clear-cut line between the first two and the last two years of medical school work. This is of particular moment since today the physician not only must be competent on the basis of his knowledge of certain gross patterns of disease, but he must also be capable of recognizing the mechanisms by which normal functions could have been perverted in any given case. In addition he must be able to

satisfactorily comprehend the scientific technics by which all of the functions may be studied.

In order to accomplish these objectives which are so necessary in modern medical education, it should not be too difficult to organize medical school teaching so that, for example, the heart may be studied histologically, grossly, neurologically; concurrently, the physiology of the heart, the action of the basic cardiac drugs, and the most common pathologic findings could be included to make up a semi-preliminary but comprehensive study of this organ in order that the student might orient himself when all of these matters are taken up later on in more detail. Orientation, exercises, and conferences would do much to lay the groundwork for the regular but modern curriculum which many schools have instituted in the last two or three years.

To accomplish this sort of teaching, however, it is necessary that a medical school have the type of faculty capable of carrying on co-ordinated teaching and the kind of faculty that will make the student think, be curious, and above all, be scientifically critical. In many instances, perhaps, there are some teachers in medical schools who have difficulty in not using the right word for the right expression of thought. Rather, they unconsciously have as a part of their daily working capacity "one-word-for-many-uses" so that their instruction may resemble the following example:

X is the Roman notation for ten.

X is the mark of illiterate men.

X is a ruler removed from his throne.

X is a quantity wholly unknown.

X may mean Xenon, a furious gas.

X is a ray of similar class.

Xmas is Christmas, a season of bliss.

X in a letter is good for a kiss.

X is for Xerxes, a monarch renowned.

X marks the spot where the body was found.

To overcome such a ubiquitous situation, the faculty member should be able to orient extensionally, which will make the student realize the primary importance of facts through the emphasis of observation and investigation. This type of orientation is diametrically opposed to the intentionally oriented form of instruction which places most of its emphasis upon definitions, verbal proofs, and theorizing. In other words, faculties in medical schools can teach the student nothing; they can, if they are so imbued with the proper philosophy of teaching, cause the student to learn.

In the final analysis, of course, the kind of faculty member that a medical school desires should be of the kind of doctor the school wishes to grad-

uate. Each institution could carefully re-examine and reaffirm this all important objective. Each institution should make up its mind whether it has as its chief goal the training of general practitioners, the training of graduate doctors or the training of research physicians, and whether graduates are primarily to be trained as future specialists or a heterogenous mixture of all three.

In my opinion the most difficult objective to consummate is the graduation of doctors who will make the best general practitioners. It is certainly more than obvious that the general practitioner should have a good all-round training. It is also a very pertinent observation that medical education has already assumed unbelievable dimensions and does not seem to show any sign of curtailment. Therefore, if the training of young men to become general practitioners is held in mind, faculties ought to acknowledge the fact and do something about revamping the curriculums to meet that exigency. There seems to be no valid argument against the statement that the general practitioner in America today must be a specialist in every branch of medicine. If this be even a half truth, then it is up to the medical schools to adjust their schedules. Finally, medical schools should stimulate the student to learn so that he will be able to qualify for such a practice in no less time than is required for the obtainment of a specialty board certificate. Also, if time is thus spent, there should be a category of specialty boards for general practitioners.

The faculty members of any medical school should not only be excellent instructors, but they should be capable research individuals. All medical school instructors must ever be ready to freely give of their time whenever possible in taking a more than slight interest in the civic affairs of the city in the area in which their medical school is located. Only in this way will the citizens of that city and the surrounding community be able to fully appreciate exactly what a medical school is all about, and certainly they will be in a better position to judge the value of a medical center in their own community.

Faculty members who are thus civic minded are not only morally, spiritually, and intellectually better teachers in medicine, but they should be able to better inculcate the high professional and scientific ideals of medicine in the minds of their students.

Over a hundred years ago Dr. John Brown, who practiced medicine in Edinburgh for many years, was deploring the fact that the old-fashioned family doctor was passing out of existence and there was a tendency for patients to run from one

specialist to another without having consulted their regular medical adviser. He pointed out that one of the reasons for this supercilious attitude could be blamed directly upon the physicians themselves, including those who were teaching in medical colleges. He argued that if the doctors who instructed the science of medical art had a broader cultural background such occurrences would not be so frequent. It would appear that Dr. Brown was far ahead of his time, because one of the requisites for exceptionally fine faculty members is this philosophy of culture, responsibility, and civic obligation.

Time does not permit a discussion of the problem of academic tenure or stability for faculty members. Such a plan appears to be an extremely poignant necessity. Academic stability of the faculty should be based upon a sound philosophy of the administration, and it should be brought out "from under the bushel" in most institutions and re-examined. A few years ago Dr. Ajax Carlson wrote "that men capable of real teaching and high grade research are not common and that their high and rare powers can neither be given nor commanded. Their performance flows from within from the light and power of the individual. Not enough clearly superior men have as yet been attracted to the profession to staff the faculties of medical schools. Men who are even good though not superior are needed in the faculties, and there is ample room for them." Such a statement obviously requires no dilatation, but it does suggest that there are many fine teachers commanding all of the attributes herein discussed who will never be Nobel prize winners. The attitude of administrators that every faculty member should be a potential Nobel prize winner before he is appointed to a medical school faculty would seem to be impractical, impossible, and almost facetious.

The threat or rumor of threat of federal medicine cannot be overlooked in thinking and planning for future medical education. The purpose of this article is not to discuss the pros and cons of federal medicine, but it is well to call attention to some of the factors which must be considered in the development of modern medical education, pedagogy, and practice.

First of all, calling a spade a shovel does not change it. Surely experiments in euphemism, the ascription of magical properties, and the taboos of certain words still serve as forms of representation so that any response to words as if they were something more than symbols is to revert to the primitive and infantile. In like manner, the failure to measure the determination of certain



large groups of peoples in this country who seem to desire federal medicine will not necessarily prevent such a matter reaching a final conclusion.

For example, the average age of large labor organizations' leaders is 46 as compared with 57 for presidents of one hundred large corporations—the capitalistic, if you wish, institutions which are very definitely linked up financially and otherwise with medical education. Will the men who are eleven years older be able to cope with the younger labor leaders who have at their command hundreds upon thousands of individuals upon whom they may call for support? This is perhaps a moot question, but it seems proper that medical educators should perhaps be thinking along the lines of instruction in their respective schools which might forewarn the young doctor who may practice medicine under some sort of federal control.

It would also seem propitious to consider briefly the fact that with unionization becoming rampant and extending even to the national pastime of baseball, the expense of medical education may be so great and the chances of return (if federal control is put into effect) so little that some students who may wish to study medicine may decide to become plumbers and get the union scale of two dollars or more per hour. Medical administrators can do much by contacting the young men and women in the universities and colleges who are considering the study of medicine. They can do much to assure them that the medical schools must meet any exigency which might arise in connection with the practice of medicine so that their fears of spending large sums of money and not expecting a reasonable return will be unjustified. The answer to this problem is not easy, but it is one for serious reflection and for the best minds in medical education to carefully consider.

I have no particular concern that medical schools and colleges will not accept the challenge which I have suggested in this paper. However, all of us must be realistic about all of these ramifications. Realism does not, contrariwise to some observers, preclude progress, self-expression, or enterprise. On the other hand, realism about anything in its broader sense encompasses pertinent experimentation on a practical basis. If always we can keep this philosophy and practice it, we can agree with Maxellus who said, "I am not worrying over possible war shortages or the necessities of life; I can always find a fork in the road, a dipper in the sky, a bed in the stream, a shelf of rocks, a blanket of fog, a curtain of mist, and a carpet of leaves."

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## A REVIEW OF STUDIES ON IMMUNITY TO VIVAX MALARIA\*

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Having been exclusively occupied during the past quarter of a century in the study of malaria and during a considerable portion of this time enjoying unique opportunities for work with induced infections, it is natural if not inevitable that a theme related to this topic be selected. Since the question of immunity to these infections has continuously held our interest during this period, it may be useful to review our isolated contributions to this subject and with the perspective of time fit them into a comprehensive picture at a definite focal point.

Induced malaria infections are widely employed in the therapy of neurosyphilis. Most commonly these inoculations are made with parasites in the trophozoite stage contained in infected blood; less frequently inoculations are done with sporozoites and effected by the application of infected mosquitoes. Since very few autochthonous infections originate from trophozoites, the former may be distinguished as artificial inoculations and the latter as natural inoculations, for they are initiated in the same manner as most autochthonous infections. The course and character of the infections induced by either method of inoculation are indistinguishable. It may be said that those artificially induced are less chronic and are readily eradicated by adequate plasmodicidal therapy while those naturally induced endure longer, manifest clinical exacerbations after protracted remissions, and are difficult to eradicate by specific therapy.

The outcome of the inoculation of an institutionalized neurosyphilitic patient usually cannot be predicted. This uncertainty is not attributable to

\*The studies and observations on which this paper is based were conducted with the support and under the auspices of the International Health Division of the Rockefeller Foundation, in cooperation with the Florida State Board of Health and the Florida State Hospital.

the possible absence of parasites from the inoculum, as their presence is readily verifiable. Rather, it is due to the circumstance that their mental deterioration but rarely permits them to give an adequate or accurate history of any prior experience with this disease. Frequently the only lead is afforded by knowledge of the patient's birthplace which, if outside of known endemic territory, justifies a presumption of susceptibility. This presumption in such individuals is confirmed by an invariable take which is followed by a clinical attack lasting three weeks or longer and a more persistent and slowly subsiding parasitemia (fig. 1). Since we have never seen an attack of such duration follow known homologous or heterologous re-inoculation, a long attack is considered indicative of previous complete susceptibility. Other patients may or may not experience a take. In those with a take, the numbers of the parasites rise about as rapidly as in the susceptibles, but the maximum attained is at a relatively low density and is either transitory or sustained for only a few days. Without therapeutic interference, the infection suddenly subsides and disappears. Depending upon the duration of the period at which high parasite densities persist, clinical activity may be evident for from one to approximately fourteen days, terminating abruptly coincident with a sudden fall in parasitemia (fig. 2, chart 8; fig. 3, charts 9 and 10). Less frequently observed are the patients in whom the parasitemia rises to a low peak then rapidly falls without producing any clinical activity (fig. 2, chart 6).

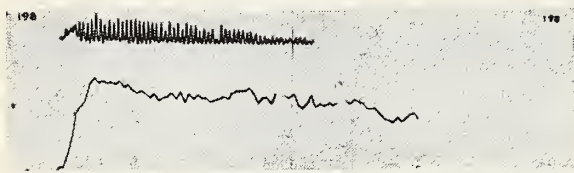


Fig. 1—Naturally induced vivax infections terminating spontaneously. Prepatent period eleven days, incubation twelve days, first clinical reaction with density of 10 parasites per cubic millimeter. Remittent fever from twelfth to fourteenth day, insensibly changing to intermittent quotidian. Spontaneous suppression of the paroxysms on the fortieth day unexplained. Note the gradual decline in temperature from maximum of 107° F. in paroxysm on nineteenth day to the sixtieth day when it did not exceed 100° F. Maximum parasite density of about 12,000 per cubic millimeter also on the nineteenth day. Clinical activity ceases spontaneously with concurrent parasite density of about 1,800 per cubic millimeter and is still in excess of 400 per cubic millimeter on ninety-third day from inoculation.

This and the following charts represent the day by day progress of (a) the clinical activity of the infection as reflected in the temperature and (b) the parasite density. The first is displayed in the upper portion of the chart and represents the temperature curve in degrees Fahrenheit taken at four-hour intervals. The lower portion, on a horizontal logarithmic scale, represents by a solid line the density of the total parasites (trophozoites and gametocytes) per cubic millimeter as determined from smears routinely taken about 8 a. m. The lowest line of the first cycle of horizontal ruling represents a density of ten parasites per cubic millimeter, and the corresponding line in subsequent cycles 100, 1,000, 10,000, and 100,000 parasites. The vertical lines mark the days elapsing since inoculation by means of infected mosquitoes, the day of which is further marked by the arrow.

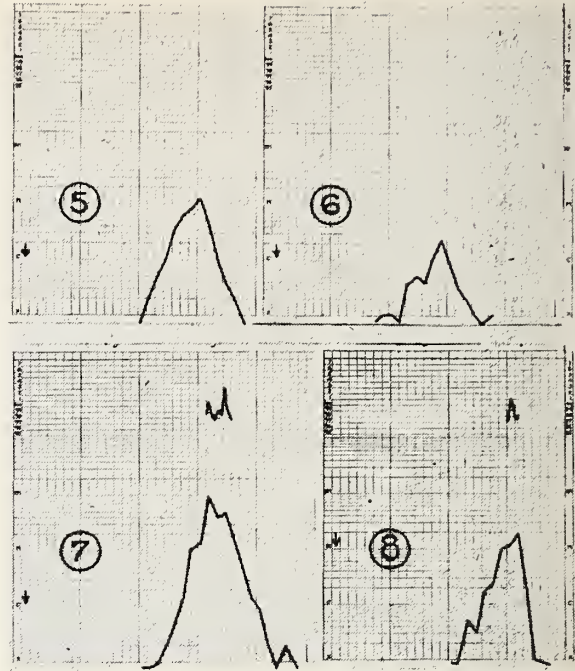


Fig. 2—Chart 5. Patient 209. Results of known homologous reinoculation. Short subclinical parasitemia. Note the low density of parasites even at the maximum, and rapid decline.

Chart 6. Patient 386. Results of primary inoculation on service with the McCoy strain. A short subclinical parasitemia, identical with previous chart.

Chart 7. Patient 308. Results of known heterologous reinoculation. Primary inoculation with the McCoy strain (not shown), reinoculation with the Ohio strain. Brief parasitemia, with three-day period of clinical activity. Note similarity of parasite curve with that seen in other charts. In all the decline is rapid.

Chart 8. Patient 410. Results of primary inoculation on service with the McCoy strain. Brief parasitemia with clinical activity for one day only.

Rarely there is encountered a patient in whom, despite inoculation with a proven inoculum, no take results. The status of the patients in the last three categories may be inferred from the course of events following the reinoculation of patients who were originally (judging from the character of their primary infection) completely susceptible. In figure 2, part 5, there is presented a chart showing the experience of a patient subsequent to reinoculation with the same (homologous) strain of parasite which produced his original infection. The parasitemia is transitory without any clinical activity at the time of its maximum. On the other hand, the patient whose experience is shown in figure 2, part 7 was reinoculated with a different (heterologous) strain of parasite from that which produced the original attack. A three-day period of clinical activity coincides with the maximum parasite density. In both instances the parasitemia declined to submicroscopical levels as rapidly as it rose. Therefore it appears justifiable to conclude that the patients who present infections similar to charts 6; 8, 9 and 10 (figs. 2 and 3), after their initial



therapeutic inoculation were not pristinely susceptible at the time of inoculation, having had previous experience with malaria.

It is further concluded from the similarity between charts 5 and 6 (fig. 2) that the experience of the patient shown in chart 6 must have been with the identical strain of parasite we employed. Comparison of chart 7 (fig. 2) with charts 8, 9 and 10 (figs. 2 and 3) leads to the conclusion that the earlier experience of the latter patients was with a strain or strains different to that employed in the induced inoculations.<sup>7</sup>

It may be alleged that the results represented by charts 5 and 6 and also the outright failures are attributable either to a deficiency or entire lack of parasites from the inoculum. While not denying that at times the outright failures may be due to this cause, such instances usually can be excluded when the mosquitoes employed are dissected and the presence of sporozoites verified. Even if present in the mosquitoes, the sporozoites might be deficient in numbers or vitality. In the latter event they may be expected to show the fishhook or horseshoe appearance indicative of degeneration, a condition they invariably undergo if the infected mosquitoes are preserved a sufficient time.<sup>2</sup> This is progressive and will be complete after fifty days

storage of the mosquitoes at a temperature of about 4 C. Consequently, in order to demonstrate that patients who were originally susceptible have, with the recovery from their infection, acquired an immunity to the strain of parasites which produced the attack, it must be shown that their re-inoculation was effected with an adequate infecting dose of parasites. This may be accomplished by applying the mosquitoes used in the inoculation of

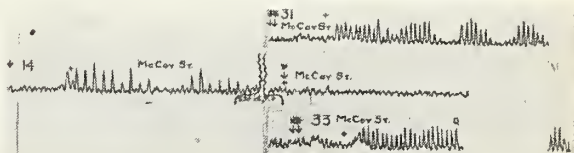


Fig. 4—Homologous reinoculation of a convalescent from infection with the McCoy strain (patient 14), the course of the primary infection being shown in the left part of the chart. The mosquitoes used in the reinoculation were previously applied to patient 31 and subsequently to patient 33. Both of these controls developed clinically active infections, but the test patient did not react.

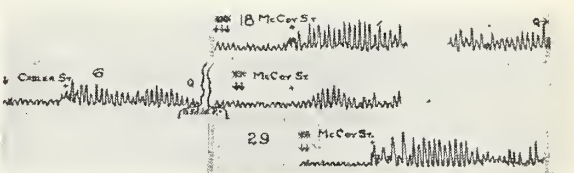


Fig. 5—Heterologous reinoculation of a convalescent from infection with the Cabler strain (patient 6), the course of which is shown to the left, by the McCoy strain. The mosquitoes used in the reinoculation were previously applied to patient 18 and subsequently to patient 29. Both of the controls as well as the test patient developed clinically active infections.

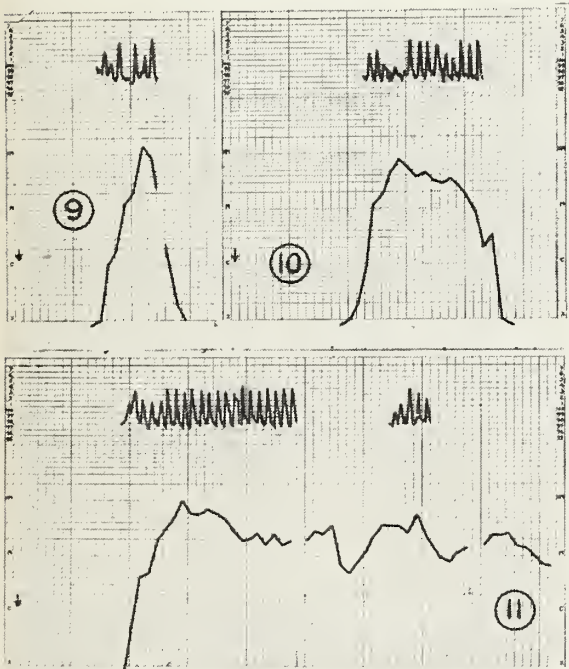


Fig. 3—Chart 9. Patient 184. Results of primary inoculation on service with McCoy strain. Brief rapidly subsiding parasitemia with clinical activity for seven days.

Chart 10. Patient 359. Result of primary inoculation on service with McCoy strain. Duration of parasitemia longer, but subsidence nevertheless is rapid; clinical attack lasted fourteen days.

Chart 11. Patient 248. Result of primary inoculation on service with McCoy strain. Parasitemia gradually declines. Continuous clinical activity for three weeks, remission of eleven days, followed by a recrudescence of five days (cf. fig. 1).

the test patient previously and subsequently to susceptible control patients. If the control patients acquire an infection, it is certain that the re-inoculated patient received an infecting dose of sporozoites.<sup>2</sup> In figure 4 there is shown the result of homologous reinoculation of a test patient whose primary attack with the McCoy strain lasted forty-two days. At the time of reinoculation with the McCoy strain sixty-three days later, parasites of the first infection were readily demonstrable. The prior control was inoculated on December 3 and 4 by a total of four mosquitoes. The same mosquitoes were applied to the test patient on December 6 and to the post control on December 8 and 9. All four mosquitoes fed once on each patient, and on final dissection all were found to have sporozoites in their salivary glands.

The controls developed verified clinical malaria after incubation periods of fourteen and thirteen days while the test patient did not exhibit any clinical reaction. The reinoculation in another similarly executed experiment was with a heterologous strain (fig. 5). The test patient had a primary attack with the Cabler strain which,

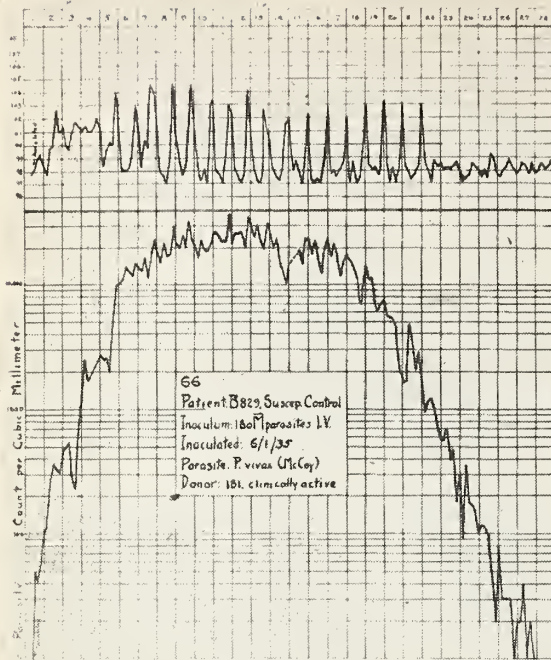


Fig. 6—Patient B-829. Intravenously inoculated with blood containing one hundred and eighty million parasites of the McCoy strain. Note that parasites were immediately detectable thereafter, and that clinical activity, initiated on the following day, must be attributed to the parasites of the inoculum. There has been suppression of the prepatent and incubation periods. Control to patient shown in following chart.

until its interruption, lasted twenty-five days. At the time of reinoculation with the McCoy strain, his smears had become negative subsequent to the administration of 30 grains of quinine. On October 7, 8, and 9, the prior control was inoculated once by a total of four mosquitoes. Three of these fed on the test patient on October 11 and 12 and two on the post control on October 24 and 25. Sporozoites were only found in the glands of the two mosquitoes which survived to bite all three patients. The prior and post controls developed verified malaria after incubations of fourteen and fourteen days. The test patient, after an incubation of fourteen days, developed an attack which lasted thirteen days, and after a two day remission he presented a two day recrudescence.

The minimal infecting dose of parasites, insofar as it relates to susceptible patients, is apparently very small. We<sup>8</sup> have ascertained by careful dilution of infected blood that infections can reliably develop following intravenous introduction of as few as ten trophozoites (incubations of twelve to fifteen days), and we secured a take following inoculation of a presumably single trophozoite isolated in a micromanipulator. We lack comparable data for sporozoites although

believing they exhibit similar potency. Ordinary routine inoculations are commonly effected with a great surplus of sporozoites provided by several infected mosquitoes, although a take may result from the mere insertion of the proboscis of a single infected mosquito. We have further shown<sup>6</sup> that considering dosage in the crude terms of the number of infected mosquitoes applied, the duration of the incubation period, within certain limits, varies inversely with the dose of sporozoites while the duration of the clinical attack tends to vary directly therewith.

Referring back to figure 1 which represents the course of a vivax infection in a person who originally was completely susceptible, it will be noted: (1) that clinical activity was initiated by very low parasite densities, not exceeding 10 per cubic millimeter of blood; (2) that for about a week after the infection developed there was a steady and progressive increase in the parasite density until the attainment of the maximum, when between ten and twenty thousand parasites per cubic millimeter were observed; (3) from this point the general trend was gradually downwards until the cessation of clinical activity some seven weeks later when a density of some two thousand parasites per cubic millimeter prevailed; (4) thereafter and as long as observations continued over a period of about three weeks the rate of parasite decline was slightly accelerated,

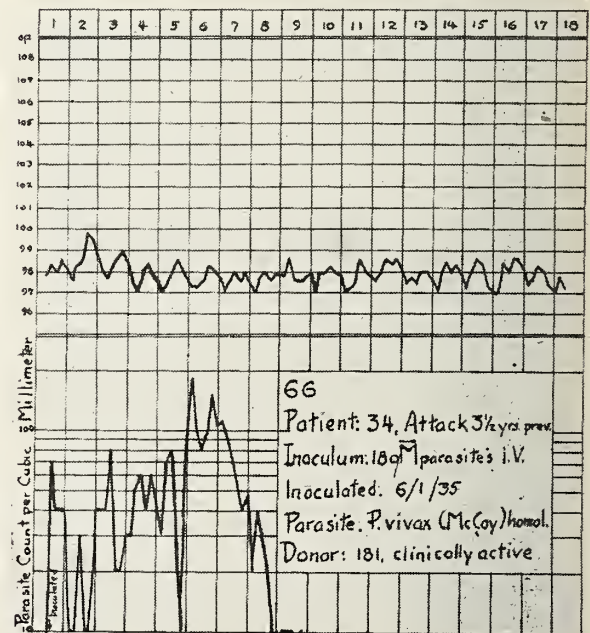


Fig. 7—Homologously reinoculated three and one-half years after primary infection with the McCoy strain. The subclinical parasitemia persisted about a week.



but they nevertheless continued to be fairly abundant.

It is apparent that experience with a malaria infection brings about certain changes in an originally susceptible patient.<sup>9</sup> The low density of parasites at the onset is in marked contrast to that prevailing at the end of the active infection, which suggests that the patient has been acquiring a tolerance to them. The rapid climb in parasite density during the week following their first appearance is an expression of exuberant growth during which interval the parasites enjoy the maximum advantage of their multiplication potential. This surge is soon checked, and the subsequent trend in density shows that at later periods

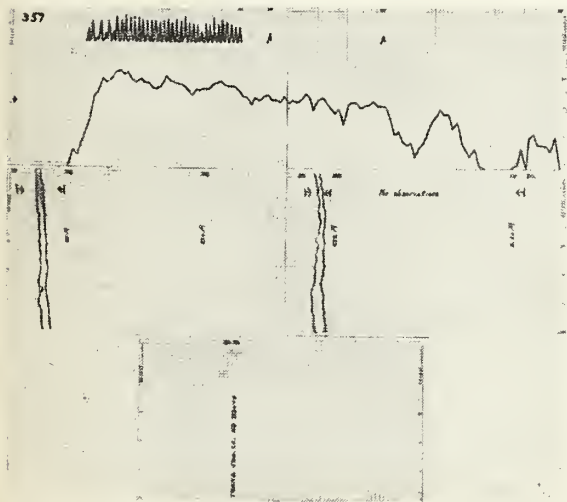


Fig. 8—Patient 357. Showing administration of three hyper-immunizing doses (middle) of homologous parasites to a patient originally fully susceptible to the McCoy strain (top), without subsequent parasitemia or clinical activity, neither of which became apparent following a further inoculation with over eight billion parasites (middle). The bottom portion shows when the patient served as the donor.

of division, the effective multiplication progressively declines. Some agency is now operating to destroy most of the parasite progeny. In the case of the reinoculated patients (fig. 2, charts 5 and 7), it will be noted that the rate of increase in the initial surge is about the same as in the susceptible (but it is brusquely checked at a lower maximum) and that the parasite numbers diminish thereafter as rapidly as they rose. Furthermore, it will be seen that these patients did not experience clinical activity until much higher parasite densities were attained. It appears that as a consequence of their earlier malaria experience the first infection sensitized some mechanism of the body to the parasites to such a degree that it was quickly activated following the reinoculation, thereupon expeditiously removing the new invaders. Although checking of the multiplication potential

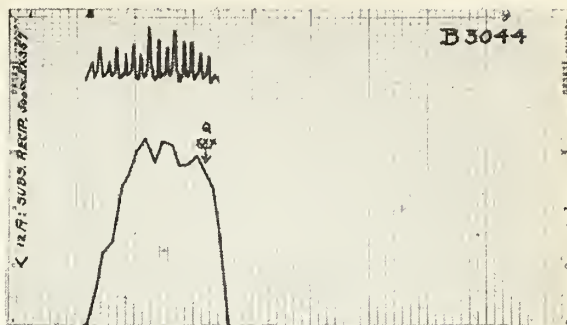


Fig. 9—Patient B-3044. Recipient of a transfusion from patient 357 immediately after an inoculation with twelve million parasites of the McCoy strain. No effect discernible.

of the parasites and the acquirement of a tolerance to the presence of the residue are manifest early, ability to remove rapidly those subsequently introduced develops much more slowly and during the period of latency.

This defense mechanism, particularly when dealing with homologous parasites, is capable of expeditiously dealing with excessively heavy doses of trophozoites. We have shown that an intravenous inoculation with nineteen million or more trophozoites will permit of the immediate microscopical detection of the parasites of the inoculum in smears from the recipient, and that clinical activity due to the multiplication of the parasites of this alone will initiate clinical activity within forty-eight hours (fig. 6).<sup>4</sup> Yet similar quantities of the homologous parasites can be introduced into recent convalescents whose primary parasitemia is still patent, and although they will thereafter show a slight resurgence in their parasitemia, there is no clinical reaction. This superinfection will reach a crest in a week or ten days. If their primary infection is less recent and no longer patent, the superinfection may be patent for the same length of time. This immunity remains patent for several years, even in the apparent absence of a latent infection. Figure

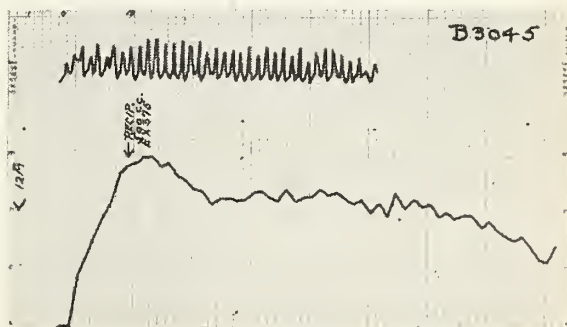


Fig. 10—Patient B-3045. Recipient of a transfusion from patient 375 two weeks after an inoculation with twelve million parasites of the McCoy strain, when the infection was fully developed. No effect discernible.

7 shows the homologous reinoculation of one patient three and one-half years after his primary infection. A patient who was inoculated with 10 cc. of the blood of the former removed prior to the reinoculation did not develop an infection. This makes the current persistence of a latent chronic infection from the first inoculation appear unlikely. The patient was again homologously reinoculated after the lapse of a further interval of three and one-half years or a total of seven years from his primary infection without experiencing more than a transient parasitemia from the reinoculation. Acquired immunity is thus seen to be not only very potent but to have appreciable endurance.

On the other hand, the development of homologous immunity to two strains of parasites in convalescents who had been simultaneously inoculated with two strains in approximately equal numbers appears weaker than that exhibited by patients infected with but a single strain. Reinoculation with either strain is commonly followed by further clinical activity.<sup>5</sup>

It will be recalled that reinoculation of a convalescent with the homologous strain in the instances presented resulted in the patient exhibiting a subclinical parasitemia with characteristics suggestive of a superinfection. This logically raises the question as to whether a series of reinoculations with the homologous strain might reinforce or exaggerate this immunity so that the patient will become able to remove promptly large numbers of trophozoites without exhibiting this subclinical parasitemia. If attainable this may be considered a state of hyperimmunity.

In order to explore this possibility, it was decided to utilize convalescents whose protracted primary attack and more protracted primary parasitemia indicated that prior to their original inoculation they had been pristinely susceptible. After some preliminary trials it appeared best to defer the first reinoculation until the primary parasitemia had subsided to submicroscopical levels and to space the reinoculations at not less than monthly intervals.<sup>8</sup> This series of observations culminated in the immunization of two

patients, the results of which are presented in Table 1, while one is graphically presented in figure 8.

These convalescents already had a very potent immunity when the series of homologous reinoculations was begun, as neither the first nor any subsequent reinoculation resulted in any return of a detectable parasitemia or any clinical reaction. Finally, at the fourth reinoculation each received an enormous inoculation with over eight billion of the homologous parasites. Results were altogether negative. This inoculation necessitated a transfusion with 100 cc. of infected blood. When it is considered that this is at least eight hundred million times the minimal infecting dose, it is seen that they possessed a formidable immunity.

Should this immunity have humoral characteristics in any appreciable degree, it is reasonable to expect that it might be passively transmitted and its action be manifest in infected recipients. Consequently, hyperimmune 357 served as a donor of a 500 cc. transfusion to patient B-3044, given practically simultaneously with the inoculation of the latter with twelve million parasites of the same strain. The results, which are shown in figure 9, do not suggest that the inoculation was adversely affected by the transfusion. Another patient, B-3045, was similarly inoculated with twelve million parasites, and on the thirteenth day thereafter when the parasitemia was about 8,000 per cubic millimeter and the clinical attack was in its ninth day, he was the recipient of a 500 cc. transfusion from hyperimmune 375 (fig. 10). There was no discernible effect therefrom on either the parasitemia or clinical course. This suggests that the immunity of the hyperimmunes is cellular rather than humoral in character.

The observations cited indicate that the mechanism of the homologous immunity evident in a vivax convalescent is exerted against the trophozoite stages of the parasite. It is acquired regardless of whether the primary attack is artificially induced (by trophozoites) or naturally induced (by sporozoites). However, it does not appear that this immune mechanism is capable of dealing with subsequently introduced homologous

TABLE I

Results of repeated and simultaneous homologous reinoculation of convalescents from an infection with *P. vivax* (McCoy strain)

Patient	Orig. Infection.	Duration of primary		Attack	Term attack	No.	Day ex. first inoc.	Reinoculations	Dose millions paras.	Result.
		Prepat. period 14d.	Incub. period 17d.					Prior parasitemia		
357	Nat. ind.			37d.	Spont.	(1)	316	Neg.	39	Neg.
						(2)	348	Neg.	234	Neg.
						(3)	497	Neg.	272	Neg.
						(4)	539	Neg.	8,140	Neg.
						(5)	692	Neg.	52	Neg.
375	Nat. ind.	15d.	14d.	43d.	Spont.	(1)	159	Neg.	39	Neg.
						(2)	191	Neg.	234	Neg.
						(3)	340	Neg.	272	Neg.
						(4)	382	Neg.	8,140	Neg.
						(5)	536	Neg.	105	Neg.



sporozoites. At least some of these cells survive to produce in a manner as yet unknown the trophozoites of the subclinical infection.<sup>3</sup>

The significance of this is shown in figure 11<sup>8</sup> in which a convalescent from a naturally induced infection was reinoculated with 69, 370 and 159 million trophozoites on the 110th, 273rd and 280th days, and experienced a protracted subclinical parasitemia after the first, a transitory parasitemia and one elevation of temperature immediately after the second, and a transitory parasitemia a few days after the third. When finally re-inoculated by forty-five demonstrably infected mosquitoes (a massive dose of sporozoites), trophozoites were again discernible for five days after a prepatent period of thirteen days.

Nevertheless, we have attempted to immunize with attenuated sporozoites. Recalling that the sporozoites in infected mosquitoes which have been stored at a temperature of 4 C. for fifty or more days are degenerated and noninfectious, we attempted the immunization of patients with these presumably attenuated sporozoites, as shown in Table 2.

TABLE II Attempt at active immunization of susceptible patients by inoculation with attenuated sporozoites (P. vivax, McCoy)									
		Age sporozoites first		Application on					
Patient	Mosquito Lot	Appli-	Pos.	Appli.	Pos.	Appli.	Pos.		
176	299	55d.	17	17	9	17	9		
177	299	55d.	16	10	16	10	16	10	
178	299	69d.	.....	.....	.....	16	5		
179	299	69d.	.....	.....	.....	16	2		

These patients were later inoculated in series with controls by virulent sporozoites of the same strain as shown in Table 3.

It is not apparent that the application of the degenerated or attenuated sporozoites has resulted in their recipients exhibiting any discernible immunity to sporozoites. It is obvious that the degenerated sporozoites inoculated probably have been few in numbers, while the test inoculations were probably done with an excessive number of virulent sporozoites. Perhaps the degenerated sporozoites introduced were insufficient to serve an antigenic function. Yet regardless of what might be the body's response to sporozoite antigen in large quantity (providing technical difficulties in the way of production could be overcome), it does not appear that the immunity manifest by a

large proportion of the population living in highly endemic areas is likely attributable to an acquired immunity to sporozoites. The apparent limitation of the immune mechanism to a defense against trophozoites conceivably may be due to a difference in the antigenic composition of trophozoites and sporozoites; to limited numbers of sporozoites; or to the rapid succession of the sporozoite stage by another, passed in a protected situation which does not permit them to function antigenically. On the other hand, the trophozoites, regardless of whether stemming from inoculation by sporozoites or trophozoites, are produced in sustained abundance in ample antigenic quantities and occur in a situation where they be expected to exert their maximum capacity for stimulation.

The circumstance that through a series of re-inoculations with the homologous living parasites (with or without the production of superinfections) a formidable degree of immunity is produced leads one inevitably to query whether more or less comparable results might be secured from the inoculation of killed parasites. Consideration of this question immediately reveals the presence of technical obstacles. Among them may be mentioned: (a) the inability to secure adequate quantities of parasites from *in vitro* cultures, necessitating the employment of those present in fresh whole blood; (b) the circumstance that in the blood they are in intimate association with the erythrocytes; (c) the further circumstance that the parasitized erythrocytes are quite highly diluted among uninfected cells; (d) the difficulty of effecting a separation and concentration of the parasites from their host cells; and (e) the additional difficulty of killing the parasites without producing significant alteration of the cellular elements of the blood.

Since plasma quinacrine levels of one hundred twenty micrograms or thereabout are known to be capable of destroying parasites in the circulation, it appeared that the problem might be tentatively approached by producing a high quinacrine level in test patients into whom large parasite inoculations are made. It was expected that the quinacrine would quickly destroy the parasites *in vivo*, permitting them to exercise whatever anti-

TABLE III Test inoculation of patients inoculated with attenuated sporozoites									
		Days since last appl.		Mosquito Lot		Number infectious mosquitoes consecutively applied			
Controls	Patients	Date inc.	Attenuated Sporozoites			Appli.	Infect.	Incuba-tion	Attack
180	177	4/13		308		9	8	8	31
	179	4/17	7 d.			7	7	9	10
		4/20	10 d.			6	6	10	4
181		4/24				6	6	13	62
182		4/13		308		9	9	10	11
	176	4/17	7 d.			8	8	9	32
	178	4/20	10 d.			7	7	11	16
183		4/24				7	7	12	15

genic effect they might. Furthermore, in this manner there is avoided the troublesome problem of killing and concentrating the parasites *in vitro*. It is well known that vivax infections induced by trophozoites are, in contrast with those induced by sporozoites, readily eradicated by plasmodicidal drugs.<sup>10</sup>

Two presumably infected patients were given three full therapeutic courses of quinacrine hydrochloride, receiving on the first day of each a total of 0.4 grams, on the second day 0.6 grams, and for ten days thereafter 0.3 grams until they had received in divided doses a total of 4.0 grams. These courses were given in June, August, and September. On the fourth day of each course they were intravenously inoculated with blood containing living *P. vivax* of the McCoy strain amounting to

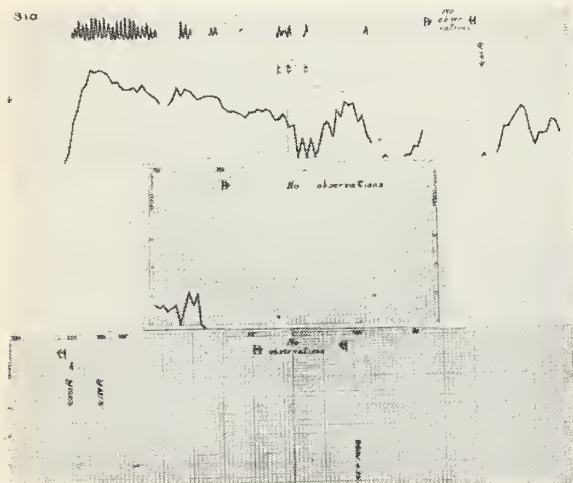


Fig. 11—Patient 310. Hyperimmunized to the McCoy strain following convalescence from attack. Reinoculated by forty-five infected mosquitoes (bottom); parasites reappear in about two weeks and remain at minimal densities for five days.

79 and 109 millions of trophozoites for the first and second inoculations, and 263 and 225 millions respectively in the third. Parasites were seen in smears from both taken immediately following the first inoculation and on the following day; none were seen in either patient following the second inoculation, while one patient showed parasites on the day following the third inoculation. Apart from these instances no parasites were noted, and the patients remained in good health. Quinacrine levels in both patients were in excess of 120 micrograms per liter on all occasions except the first inoculation of one when it was between eighty and one hundred twenty.

Obviously the test inoculation of these patients could not be effected until practically complete excretion of their accumulated quinacrine. In the following April their plasma gave determina-

tions of 1.6 and 0.9 mcg./L, which might represent either a trace or a high blank reading.

The patient with the 1.6 mcg. was inoculated with the McCoy strain by the application of two

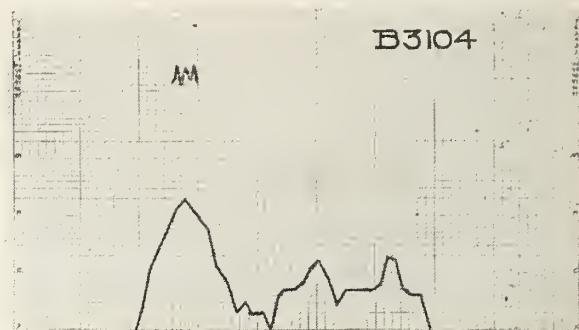


Fig. 12—Patient B-3104. Showing result of natural inoculation subsequent to a series of immunizing inoculations effected by administration of living parasites while patient was saturated with quinacrine (cf. chart 7, fig. 2).

infected mosquitoes on April 2. Parasites were first seen in the smear of April 16, and an elevation of temperature on April 21 marked the onset of a series of three quotidian paroxysms which terminated spontaneously (fig. 12).

The other patient was similarly inoculated on April 19 by a single infected mosquito. The smear of April 28 was the first to show parasites. The first elevation of temperature occurred on May 5, initiating a series of seven quotidian paroxysms which ceased spontaneously (fig. 13).

Assuming that these patients were originally fully susceptible, they did not on final inoculation with living sporozoites prove refractory to inoculation, as would be expected in the case of a hyperimmune. Nevertheless the courses of their infections indicate they were not completely susceptible, and they exhibited the following very definite characteristics of immunity: (a) a high pyrogenic threshold; (b) the maximum density attained by the parasitemia was low, and (c) tran-



Fig. 13—Patient B-3106. Showing results of natural inoculation subsequent to a series of immunizing inoculations effected by administration of living parasites while patient was saturated with quinacrine (cf. charts 7 and 9, figs. 2 and 3).



sitory, with (d) a rapid spontaneous decline; and (e) a short clinical attack. From this it would appear that these patients have acquired an appreciable immunity following the intravenous administration of living parasites, effected at times when their plasma was saturated with quinacrine.

### Summary

The malaria antecedents of most neurosyphilitic patients referred for malaria therapy are unknown. Their response to inoculation with *P. vivax* by either natural or artificial means permits of their classification in four categories:

- 1) Inoculation resulting in a take—
  - a) An attack of three weeks or longer;
  - b) A short attack lasting from one day to two weeks or thereabouts;
  - c) Without a clinical attack; and
- 2) Inoculation not resulting in a take.

An interpretation of the significance of these results is permitted from the homologous or heterologous reinoculation of patients on the service. Since infections of the character of 1a have never been observed subsequent to reinoculation, it is inferred that patients with attacks of three weeks or more in duration were previously completely susceptible. Results like 1b may follow either heterologous or homologous reinoculations, and in the latter case indicate that immunity is incomplete. Following homologous reinoculation, results like 1c or 2 may be secured. The latter indicates a very effective immunity, or refractory condition.

It is readily made evident by reinoculation with demonstrably infectious material that convalescents from vivax malaria have acquired, as a result of this experience, a distinct and at times very potent immunity to the homologous parasites. A comparison of the parasite density prevailing at the beginning and end of the clinical attack indicates that a tolerance to the presence of the parasites is the first manifestation of a change in the individual's status. The restraint in the exuberant multiplication of the parasites which is soon evident is probably derived from the host but is not likely to be specific. Some time after the infection becomes latent, and the latency may be regarded as an expression of the new state, the host becomes aggressively inhospitable to the trophozoites, being able to expeditiously remove and destroy numbers fantastically greater than the scanty few which can initiate an infection in a susceptible person.

This mechanism appears to be directed against trophozoites, as reinoculation of an immune person with homologous trophozoites in blood may in a

refractory person result in their immediate disappearance; if the reinoculation is effected with infected mosquitoes, trophozoites will make their appearance after an appropriate prepatent period but soon disappear. Hence, it does not appear to be operative against sporozoites.

Through repeated reinoculations with living homologous trophozoites and the production of superinfections, an individual may pass from stage 1b to 1c to stage 2 of complete refractoriness or hyperimmunity. Such a state appears to be of considerable duration, and it is not evident that its continuance depends upon a persistence of a latent infection. Since attempts to passively immunize susceptibles through transfusions in which hyperimmunes served as donors have been failures, it is unlikely that the immunity to any great degree is humoral.

A few attempts to immunize with attenuated sporozoites have been unsuccessful although it is realized the possibilities have not been adequately explored. It does not appear that even if possible, immunization to sporozoites is often if ever realized in nature because of the relatively small amount of antigen available and introduced. Furthermore, the available evidence indicates that the defense mechanism in hyperimmunes does not get into action until trophozoites are produced following mosquito inoculation. This suggests that either the sporozoites or their successors are inaccessible to the immune mechanism, that they are of different antigenic composition, or that their numbers are insufficient to serve an antigenic function.

The possibility of effecting active immunization with killed parasites is an intriguing subject but is beset by many technical difficulties. A simple approach sufficient to determine its basic practicability is afforded by inoculation of living parasites into susceptible subjects who have been saturated with quinacrine, thus killing the parasites *in vivo*. Two patients originally presumed to be completely susceptible who were given three inoculations of parasites when prepared in this fashion reacted to the infection on subsequent reinoculation by infected mosquitoes as partial immunes of category 1b.

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## THE DOCTOR TREATS THE PATIENT

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One hundred years have passed since Iowa became a state, and the amazing changes and progress during that period of time are no better demonstrated than by those in the field of medicine. Despite progress in technics, however, certain fundamentals persist.

Preventive psychiatry, more commonly termed "mental hygiene," holds special interest today, and the need for its development has been brought out especially by the lessons learned from the medical history of World War II. The high incidence of diagnosed neuropsychiatric disorders in both field and hospital sick lists not only identifies clear-cut psychiatric illness but places emphasis, which is no longer deniable by skilled medical observers, on the role played by functional emotional factors in so-called nonpsychiatric somatic illness. The need for mental hygiene and psychotherapy in general medicine is now established in the minds of every physician.

This may be considered as a new development in the year 1946, but it is a technical, not a fundamental development. When Iowa was a pioneer territory before the year 1846, the fundamental value of mental hygiene had already been named and discussed. In the year 1843 there was published a book entitled *Mental Hygiene or an Examination of the Intellect and Passions Designed to Illustrate Their Influence on Health and the Duration of Life* by William Sweetser, M.D., late professor of the theory and practice of Physics, and fellow of the American Academy of Arts and Sciences.

The conclusions of Dr. Sweetser make fascinating reading. In fact, many of his passages could be quoted by present day medical writers, internists as well as psychiatrists, with appropriate association with their case reports.

Even though these concepts may have been in existence these past one hundred years, little use of them was made. The early clinical work of

Freud and the later researches of his associates gradually turned more studies from the cells of man to the understanding of the motivation of his cell activity and total behavior. Continued psychiatric clinical observation found that cells and substance, nerves and muscles, organs, secretion and mobility were more often affected by the mind of man. This mind included not only its content but its setting, especially the "stored up setting" acquired in the early years of childhood. This background plus experience gained as the individual grows older begets security with love, consideration, tolerance and generosity, or insecurity with hate, worry, fear and anxiety, and mental conflict. Mental conflict, a functional process, both indirectly and directly serves to cause the tensions so often found as the basis of the "inability to be well."

This field of functional illness or psychosomatic medicine as presently described may be new in terminology, but as a concept it is old and fundamental. It is now newly characterized and emphasized. It was developing very rapidly by means of clinical practice and research by psychiatrists and in many leading medical clinics prior to World War II. The experience of the past decade was brought sharply into focus by the war, and physicians found that it helped a huge number of patients. The acute etiology of war brought out what chronic etiology in emotional maladjustment had struggled to show before in civilian life.

About fifty thousand physicians were actively connected with some branch of the armed service. They found that of the medical conditions in and out of army hospital beds, 40 per cent were due entirely to nonorganic etiology of functional origin. They realized that dismissal of such patients with a label of neuropsychiatric was neither a solution for the patient or the army, nor satisfactory to the conscientious physician. Most of these patients were sick but organically sound. For the first time therapy was a "must," and the few skilled psychiatrists had the opportunity of demonstrating the wide effectiveness of psychotherapy. The variety of patients was manifold, and the total case load needs were enormous. Perhaps it took World War I to make psychiatrists discover psychiatry, but World War II made medicine as a whole understand psychiatry and psychotherapy.

The internist found many gastro-intestinal syndromes which could be described accurately only as "tension states." Even superficial psychotherapy achieved amazing results with tension.

The urologist found many patients who were really infected or ill, and some who had only



guilt reactions or fear. The use of psychotherapy for guilt reactions, dissipation of fear and reassurance was vital.

The plastic surgeon must treat the disfigurement of the patient's concept of his appearance as well as the actual damage to the exterior of the man. Paranoid ideas and the ideas of reference were problems for psychotherapy.

The ophthalmologist found the talking out of the limitations and frustrations and of the necessary change of life patterns for the blind patient was the important therapy needed for building the ego and the future successful adjustment.

The orthopedic surgeon expended much skill on the amputation and fitting of artificial limbs for amputees, but the psychotherapy contained in the acquisition of special skills and in the fundamental reconditioning program was the strength on which the patient must progress.

What the war brought in concentrated experience to so many physicians practicing in so varied specialties is past, but the one thing brought to all these physicians in common was the concept that the patient as a whole must be treated. Such treatment, to be good, must be to some extent psychotherapy.

The teaching of the principles of therapy for functionally ill patients is no longer solely possessed by the psychiatric specialist. In fact, there is some reason to believe that the internist and other specialists may better aid their students in the practice of medicine by developing a concept of the importance of psychotherapy without special reference to its psychiatric origin or association. Psychotherapy has always been an integral part of the therapeutic endeavor of any high grade physician. It may have been unidentified by name before, but it has always been present. Its formal recognition and delineation have been established by psychiatrists in their special therapeutic work, but the amazing wonders of its accomplishment can no longer be neglected. They must be purposely and planfully used by all doctors who treat patients.

### Doctors

The Iowa State Medical Library needs all kinds of medical journals. Won't you send yours Freight Collect or Express Old Magazines Collect to Dr. Jeanette Dean-Throckmorton, Iowa State Medical Library, Historical Building, Des Moines 19, Iowa.

## CLINICOPATHOLOGIC CONFERENCE

### CARCINOMA OF THE LUNG WITH INTRACRANIAL AND SKELETAL METASTASES

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Malignant pulmonary neoplasms are not rare and are even commoner than was once supposed. It has seemed worth-while, however, to record the following case because it is of unusually long duration and affords an illustration of the difficulty involved in diagnosis.

The brain may be the first site of metastasis in lung cancer as well as the earliest clinical reference point to an intracranial lesion. During this time the primary tumor may be remarkably silent so that cough, hemoptysis and evidence of bronchial stenosis emerge as much later phenomena. It has become more and more the practice to include an x-ray of the thorax in the study of obscure and baffling medical cases, and not infrequently the enigma is thereby solved. Even then, however, the diagnosis may be missed unless such a possibility is considered, for the correct answer does not follow, as is too often implicitly assumed, from a mere adding up of the ascertainable facts. The crux of the matter lies rather in the proper and logical interpretation of these facts.

The complaints of patients such as this one forcibly remind one of the jigsaw puzzles recently so popular. When the picture is complete, how easy it is to see where the bizarre components fit into place, but how difficult, before this has been accomplished, to arrange them so that the result makes sense!

The following history was prepared by the physician who had charge of the patient during the last weeks of his life. We believe that it, in conjunction with the post-mortem findings, will prove worth your study.

W.B.R., a white male 61 years of age was admitted to the Iowa Lutheran Hospital on Sept. 29, 1941.

For the past eight winters he had had attacks, one each winter, in which for a period of four or five days he became demented. During these he had no fever but became very destructive, could not be held in bed, and would sometimes get out of the house and wander around until brought home.

About three years ago a physician was called

during one of these attacks and found what he thought to be pneumonia. It was then decided that the psychosis was toxic in origin.

During an attack in January, 1941, he broke away from his wife and went downtown. He was arrested for drunkenness and put into jail. After four days there the police decided that the mental condition was lasting too long for simple drunkenness. He was therefore sent to the Clarinda State Hospital. There it was found by x-ray that he had a "solid right lung." The ends of his toes were also found to be frozen.

He was held at Clarinda for sixty-two days. His psychosis disappeared after the first few days there and the lung was said to have improved. However, toward the end of his stay he began to have pain in the left temporal region. This was diagnosed as neuralgia, but no cranial x-ray studies were made.

He was sent back home. The pain continued in the left side of his head until July, attaining severe proportions. Then, coincident with the lessening of his head pain, he noticed a soft spot in the back of his head.

He had had no other pain during this time with the exception of rather severe aching in the left middle toe. This had remained inflamed ever since he had been at Clarinda. He had no pain in the chest but did cough, bringing up some sputum.

He began to lose weight in July, and there was some increasing weakness. He called a physician who referred him for x-ray studies of the head and chest:

A hopeless prognosis was given, and finally a specialist in diseases of the heart and chest was

called. Because of poor facilities for care in the home, he was sent to the Iowa Lutheran Hospital on Sept. 4, 1941.

Disturbance of vision, which had been present for about one month, became worse after his arrival at the hospital. He also began to have increasing thirst and increased urinary output. Following a generalized convulsion on Sept. 20, he

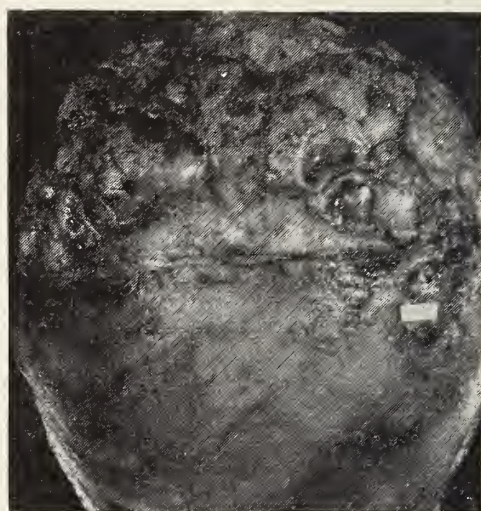


Fig. 2—Photograph of cranial cap.

was found to have a left hemiplegia. This paralysis cleared to a great extent, leaving a residual paresis of the left arm and a droop of the left upper eyelid. Two days before his death, he developed a stiff neck and a temperature of 105 F. with increasing coma.

Post-mortem examination was performed. External examination showed that on the chin just to the right of the mid-line there was a tumorous mass about 1.5 cm. in diameter and rather warty in shape, somewhat elevated above the surface. It was whitish in color and although for obvious reasons no sections were made, it was certainly a metastatic nodule.

The third toe of the left foot showed a fusiform swelling of about 4 cm. maximum diameter. This was quite soft, but there was no breaking through the skin although it was already a bluish color.

The most remarkable abnormality, however, was evident on palpation of the posterior portion of the skull. This was very soft and felt as if the bone were absent and the brain just beneath the scalp.

Examination of the cranium showed the scalp to be adherent to the underlying calvarium. When dissected, the soft swelling mentioned above was



Fig. 1—Lateral roentgenogram of cranium.



found to consist of a tumorous mass, very nodular and rather soft, which had invaded almost the whole occiput. Most of it did not go through the skull and had destroyed only the outer and middle tables. In the center over an area of about 5 x 3 cm., however, it did penetrate and was continuous with a similar tumor beneath.

This latter tumor mass, roughly 4 to 5 cm. in diameter, was found to occupy mainly the right leaf of the tentorium cerebelli and the posterior part of the falx cerebri. Part of it was cystic, but the greater portion consisted of a rather firm irregular mass of whitish tissue, warty in appearance and spreading in plaques over the neighboring dual surfaces. Its similarity to the tumor on the chin was most striking. Cross section showed that it was composed of a white, granular material, partly necrotic.



Fig. 3—Posterior view of cerebrum and cerebellum.

Deep in the left cerebral hemisphere near the posterior horn of the ventricle there was a cyst about 2 cm. in diameter which had a yellowish, necrotic wall. A few smaller cysts were found also in the neighborhood.

Examination of the thorax showed that the lower portion of the right lung was densely adherent to the chest wall. Section of the middle and lower lobes showed a destroyed parenchyma with very large dilated bronchi filled with thick, mucoid pus. All the intervening tissue was of firm consistency and grayish yellow in color.

The upper right lung lobe and the whole of the left lung, while markedly congested, showed no such abnormality. This indicated stenosis of a bronchus, and dissection showed, near the bi-

furcation of the trachea and in the sub-branch of the right bronchus which goes to the middle and lower lobes, a tumor mass which obstructed it completely. Section showed that it also surround-



Fig. 4—Photograph of right lung.

ed the bronchus and had infiltrated the region over an area almost the size of an adult fist. Curiously enough it surrounded the blood vessels in that vicinity as a thick sheath without actually penetrating them. The tumor was composed of a white granular tissue and was undoubtedly of bron-

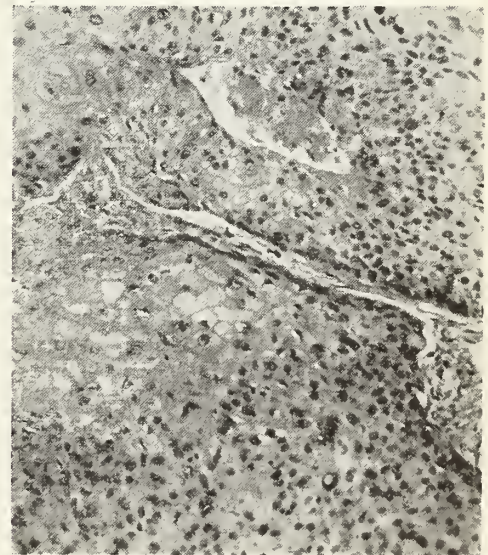


Fig. 5—Microphotograph of epithelioma of the bronchus.

chogenic origin, for pulmonary nodules of metastatic origin almost never cause bronchial stenosis.

The remainder of the examination showed only



a nodule in the liver and a similar tissue in the toe which practically replaced the phalanges.

As is evident from figure 7, the tumor grew in broad sheets as large polygonal adjacent cells with some suggestion of epithelial pearl formation. It was certainly to be classified as a squamous cell carcinoma. Histologically it did not show a high grade of malignancy, certainly not the wild lack of differentiation commonly seen in pulmonary neoplasms. This agrees with its long duration and the slow progress of the symptoms.

Were the attacks of dementia occurring at intervals for eight years due to early cerebral metastases? Although this cannot be proved, we believe that it is the logical assumption. The histologic picture of the intracranial lesions, quite identical with those in the lung, gives the impression of very slow progression. Also noted in the history was that three years before death the physician who examined him during one attack noted a solid portion of the lung and assumed that it was due to pneumonia. The last attack, which occurred nine months before his death, was apparently no different from the others and must have been due to the brain involvement.

When we consider how very little we know of the early history of certain cancers and how many surprising clinical phenomena occur in this variegated group of diseases, we do not believe that anyone can summarily dismiss these cerebral attacks, even the earliest ones, as irrelevant. In such case then, the duration of the disease appears remarkable.

#### MINUTES OF MEETINGS OF STATE SOCIETY OFFICERS AND COMMITTEES

##### Meeting of the Committee on Medical Service and Public Relations Aug. 28, 1946

The Committee on Medical Service and Public Relations met in the central office Wednesday morning, Aug. 28, 1946, to discuss the veterans' care program with Dr. Andreassen, Dr. Fitzsimmons and Dr. Patterson of the Veterans Administration. Present were Doctors Gutch, Parker, Olsen, Maxwell, Sternagel, and Shaw.

Dr. Andreassen explained that the VA was setting up a uniform schedule so that the listing of procedures would be the same for all contracts. Upon this new schedule all states would transpose their suggested fees. He stated that Part One, applying mainly to rating examinations, was ready and he hoped we would sign it and start work. Part Two should be ready shortly. He also said he thought the administration should be handled through Iowa Medical Service and that all states in this district

intended to handle it in that way. This was at variance with an opinion from the Washington office.

The committee filled in Part One of the schedule and reiterated its belief that Iowa Medical Service should be the fiscal agent for the State Society.

##### Meeting of the Executive Council Sept. 5, 1946

The Executive Council of the Iowa State Medical Society met at Hotel Fort Des Moines Thursday evening, Sept. 5, with the following persons present: Doctors Parker, Parsons, Carr, Knipe, Hill, Householder, Boice, Gutch, Macrae, Reiley, Marker, Woodward and Sternberg of the Council; E. M. George, editor; and J. W. Billingsley, chairman of the Legislative committee.

Dr. Gutch explained the present status of the veterans' care program to the group, telling them of Dr. Andreassen's visit and recommendations. The matter was discussed, and although a quorum was not present, the group unofficially went on record as unanimously backing the president and the committee in the decision to go ahead with the program as approved by the House of Delegates.

##### Meeting of the Publication Committee Sept. 5, 1946

The Publication Committee met following the Executive Council meeting with Doctors George, Marker, Sternberg, Woodward and Parker present. Miss Viola Turner was given the title of assistant editor, and the editor was asked to assign definite dates for editorials by his associate editors.

##### Meeting of the Board of Trustees Sept. 5, 1946

The Board of Trustees met following the meeting of the Publication Committee, with Doctors Marker, Sternberg, Woodward and Parker present. Bills were authorized, the JOURNAL contract for 1947 was awarded to the Wallace-Homestead Company, plans for the annual meeting were discussed, and expenses of a delegate to the Congress on Industrial Health were authorized. Also authorized was the attendance of Miss Turner to the Editors' Conference, and of Miss McCord to the Secretaries' Conference and House of Delegates meeting in December.

##### Meeting of the Committee on Medical Service and Public Relations Sept. 15, 1946

The Committee on Medical Service and Public Relations met in the central office Sunday morning, Sept. 15, with the following persons present: Doctors Sternagel, Bernard, Olsen, Shaw, Maxwell, Parker, Parsons, and, ex-officio, Harkness. Matters discussed were as follows: present status of the contract for veterans' care; old age assistance program; rural health problems and the Hill-Burton bill; integration of VA program into Iowa Medical Service office; mental hospital study; and state and national legislation.



# STATE DEPARTMENT OF HEALTH



## THE RECALCITRANT TUBERCULOSIS PATIENT

### Added Regulation to Shield Community Health

The accompanying health regulation entitled, "Isolation of Recalcitrant Tuberculosis Patients," was prepared by a committee with M. E. Barnes, M. D., Professor of Hygiene and Preventive Medicine, University of Iowa, as chairman. The committee was appointed by the State Health Commissioner at the semi-annual meeting of the State (Advisory) Board of Health, held July 9, 1946. The regulation has been approved by members of the Advisory Board and is now part of the Rules and Regulations of the Iowa State Department of Health.

The added measure for the control of tuberculosis was formulated at the request of various health officers, private physicians, the Iowa Tuberculosis Association and other groups within the State. Isolation and placarding of premises can be applied to the patient who has tubercle bacilli in the sputum and who refuses sanatorium treatment or returns from the sanatorium before treatment has been completed; also to the open case of pulmonary tuberculosis (one with positive sputum) when the patient does not conform with the restrictions of the State Department of Health or local Board of Health in matters relating to protection of others against the disease.

This regulation applies only to the patient who is a distinct menace to children and to the public through failure to cooperate in observance of health precautions.

### Isolation of Recalcitrant Tuberculosis Patients

Pulmonary tuberculosis is an infectious and communicable disease, dangerous to the public health whenever tubercle bacilli are present in the sputum and proper precautions are not taken to prevent the spread of infection.

A person ill with tuberculosis who neglects or refuses to obey the restrictions of the State De-

partment of Health or the local health officers in matters relating to the protection of others against the disease shall be placed under isolation in a suitable dwelling and shall not be permitted to leave such residence until such time as the danger of infecting others no longer exists.

A placard may be posted on premises where a recalcitrant patient is under isolation, such notice to read as follows:

### WARNING TUBERCULOSIS EXISTS ON THESE PREMISES

.....  
Health Officer

Penalty: Any person who knowingly violates any provisions of this chapter, or the rules of the state department or the local board, or any lawful order, written or oral, of said department or board, or of their officers or authorized agents, shall be guilty of a misdemeanor. (Section 139.32, Code of Iowa, 1946).

Effective September 2, 1946.

### New Method of Preventing Scarlet Fever

Recent years have witnessed development of a new and apparently effective method of preventing scarlet fever. Active immunity is brought about through use of an improved type of toxin devised by Veldee of the United States Public Health Service and tested during a period of years on a large group of school children. Major advantages of the new method are the following: (1) only three preventive treatments are required; (2) undesirable reactions have been reduced to a minimum, and (3) definite protection is conferred against scarlet fever.

*Nature of the antigen:* "During the first year of the study," quoting Veldee and associates, "an alcohol purified and tannic acid precipitated toxin<sup>1</sup> was used, and thereafter an ammonium sulfate purified and tannic acid precipitated toxin.<sup>2</sup> The antigenic value of the two preparations in the dilutions used was the same irrespective of the potency

of the parent toxins. By using suitable ingredients in the culture medium and maintaining at all times optimum conditions for growth<sup>2</sup> it is possible to obtain a highly potent toxin in a medium which lends itself to a high degree of purification by one precipitation with ammonium sulfate. For example, lot No. HL-50 contains 4.337 mg. of total nitrogen and approximately 500,000 S.T.D. of toxin per cc. in the crude state. One precipitation with ammonium sulfate (65 per cent saturation) reduced the total nitrogen content to 0.728 mg. without appreciably affecting the toxin content. Resolution of the toxin and precipitation with tannic acid further reduced the total nitrogen to 0.574 mg. With this particular lot of purified and tannic acid precipitated toxin the three immunizing doses contain 0.00086, 0.00344, and 0.0115 mg., respectively. This is considerably less total nitrogen per dose than would have been possible if unpurified toxin from a meat broth culture medium had been used."

*Effect of the antigen on the Dick test and on scarlet fever morbidity:* Quite without exception, scarlet fever occurs among persons who show a positive Dick test and are therefore susceptible to the disease. Veldee and his associates reported that in a group of 1,556 grade school children, 1,320 or 85 per cent had a negative Dick test when examined one or two months and some of them three to four years following the course of three preventive treatments. During a study period extending from December, 1936, to November, 1940, and involving a large group of grade school children in two Maryland counties, attending physicians observed but one case of scarlet fever among immunized children as compared with five cases among children who had not been immunized.

"Additional evidence of the protective value of the injections given is the experience in the communities along the western border of one of the counties studied (Garrett). A rather high percentage of all the children in this area had been receiving immunizing injections since the fall of 1935, whereas in the neighboring county of Preston, West Virginia, none had been given. In the winter of 1939-40 an excess of approximately 100 cases of scarlet fever was reported for the school areas of Preston County, particularly those lying next to Garrett County. The usual free movement of persons between the various communities continued without restriction. Nevertheless, no case of scarlet fever developed in the nearby Garrett County schools and daily school inspection failed to reveal cases of septic sore throat or other communicable hemolytic Streptococcus diseases."

*Indications for use of new antigen:* "It is not considered necessary or advisable," according to Veldee and his co-workers, "to attempt the immunization of persons beyond the grammar school age (in fact, it is believed that as a community measure the procedure should be restricted to first grade children or younger) except when the occupation demands it, as, for example, student nurses."

Biologic products for active immunization against scarlet fever by the new method, when not procurable locally, are available from the State Department of Health.

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#### MORBIDITY REPORT

Diseases	Aug. '46	July '46	Aug. '45	Most Cases Reported From
Diphtheria .....	26	14	8	Dubuque, Boone and Linn
Scarlet Fever .....	33	41	50	Linn, Boone and Jackson
Typhoid Fever .....	3	0	15	Delaware, Iowa and Mahaska
Smallpox .....	0	2	0	.....
Measles .....	58	189	22	Black Hawk, Bremer and Floyd
Whooping Cough .....	169	116	47	Dubuque, Scott and Polk
Brucellosis .....	44	50	14	Warren, Dallas and Guthrie
Chickenpox .....	26	38	20	Dubuque, Boone and Linn
German Measles .....	3	1	4	Kossuth, Marshall and Story
Influenza .....	0	0	0	.....
Malaria .....	21	17	80	Scott, Allamakee and Clarke
Meningococcus Meningitis .....	6	6	5	Black Hawk, Cerro Gordo and Clinton
Mumps .....	49	77	53	Bremer, Delaware and Clinton
Pneumonia .....	*1608	7	3	Clinton, Black Hawk and Pottawattamie
Poliomyelitis .....	204	45	68	Polk, Woodbury and Story
Tuberculosis .....	65	0	60	For the state
Gonorrhea .....	184	156	225	For the state
Syphilis .....	158	132	86	For the state

\*Delayed reports from Iowa Hospitals covering 26 weeks of 1946.



# The JOURNAL of the Iowa State Medical Society

ISSUED MONTHLY

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VIOLA M. TURNER, Assistant Editor.....Des Moines

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## Centennial Issue

It is well to pause and reflect at the one hundredth anniversary of Iowa's statehood and regard the progress of medicine within the borders of the state. The change-over from the physician with his gold headed cane and horse and buggy to the present-day physician with his automobile and improved roads is symbolic of the advances made by medicine itself. The inroads of political pressure have exceeded the wildest imagination of a century ago. It is a far cry from the days when molasses was added to the diet of the hospital patient to the current use of multiple vitamins and other dietary adjuncts. When one reviews the advances in medicine, it is difficult to evaluate properly which has been most spectacular—the development of the roentgen ray, sulfa drugs, penicillin, new anesthetic agents, improvement in surgical technic and asepsis, insulin, or a host of other therapeutic agents.

To signalize the anniversary, the JOURNAL is presenting a centennial issue. You will find an article dealing with the history of medicine during the past hundred years contributed by Dr. Walter Bierring. The scientific portion of the JOURNAL has been contributed by distinguished graduates of the State University of Iowa College of Medicine, each of whom has achieved a prominent position in his chosen field of medical endeavor.

We hope that we may be pardoned if we call attention to the manner in which Iowa physicians served during the past war. Many of them won commendation for their outstanding services. We

are honored also by the many general practitioners and specialists who have received world-wide attention for their work here at home. The citizens of the state of Iowa may indeed feel fortunate that the quality of medical care accorded them is rendered on such a high scientific level.

In looking back over the past hundred years, let us give credit to the men who laid the groundwork for our scientific achievements and continue with steadfastness of purpose to excel these achievements in the years to come.

## Developments in the Veterans Administration Program

Last month the JOURNAL reported to the doctors of Iowa that no contract had been signed with the Veterans Administration for home care of the veterans for service-connected disabilities. Since that editorial was written, the Committee on Medical Service and Public Relations has met with Dr. Einar Andreassen, Medical Director, Branch Office No. 8, Veterans Administration, St. Paul, Minn., and received his endorsement of having the plan administered through Iowa Medical Service as was voted by the House of Delegates. Dr. Andreassen said that all states in this district were going to handle the administration themselves through an organization similar to our Iowa Medical Service; he himself thought such a procedure would be most advantageous and entirely possible.

The Veterans Administration in Washington has made a new schedule in two parts, the first dealing primarily with rating procedures and the second with treatment. Part One has been approved and printed for distribution to the different states, and Part Two should be ready soon. These uniform schedules will enable the Veterans Administration to handle its work more efficiently. All state schedules vary in form and manner of grouping, and a uniform form will be a step forward. Fees are not predetermined but are to be set down on this uniform blank as they appeared originally on each state's fee schedule.

The Committee and Dr. Andreassen studied the fees approved by the House of Delegates for the following procedures: clinical laboratory tests; services by non-specialists (examinations, office and home visits, and mileage charges); examinations by specialists; and treatments by neuropsychiatrists. These were listed on Part One of the new schedule.

The Executive Council was called into session September 5 to discuss signing Part One as well as the willingness of the Veterans Administration

to have Iowa Medical Service serve as fiscal agent. It approved both measures. Both were in accord with the wishes of the House of Delegates. Consequently the contract was signed and mailed to the Veterans Administration September 6, and at this writing (September 16) no answer has been received.

On September 9, the State Society office sent a letter to all members in Iowa, asking them to sign cards signifying their willingness to help with the program. Acceptances have been received to date from 1,118 physicians, every county in the state being represented. Consequently it will be possible for the State Society to offer adequate medical service to veterans in their own communities.

As soon as acceptance of the contract is received from Washington, a copy of the fee schedule and a list of instructions will be sent to every physician. It is our hope to obtain a simplified examination blank and to eliminate red tape as much as possible. There is no possibility, of course, of avoiding making a complete report of each examination. We know the doctors in Iowa realize a complete picture of the condition of each veteran examined must be given to the Veterans Administration to enable it to decide what course to follow. Our hope is to make the examination form as simple yet as complete as possible so that filling it out will require a minimum amount of time.

Dr. Andreassen paid the Midwest doctors a high compliment which we wish to relay to the JOURNAL readers. He stated that he was confident the medical profession in this section of the country could handle the administration of this program without bogging down and that the doctors would provide an excellent medical service to the veterans. With this the JOURNAL heartily concurs.

### Gout

While we are celebrating a centennial, it appears proper to direct attention to a condition which has been discussed for almost three hundred years. Recently Joseph H. Pratt had occasion to remark that gout is still a forgotten disease. Certainly this condition is prevalent in the state of Iowa, and too often it is overlooked.

The clinical picture of this condition as presented by Sydenham remains a classic. Not all physicians realize that an acute inflammation of the first metatarsophalangeal joint almost always indicates the presence of gout and should be so regarded and treated until proved otherwise. Unless the disease is recognized, adequate treatment cannot be advised.

Men are more often victims of gout than women. It is more common between the ages of 30 and 60. This condition does not necessarily follow the preconceived ideas of high living, although many patients afflicted will state that they use alcohol liberally and that they indulge heavily in purine foods.

Febrile polyarticular gout is a severe type of acute gout usually accompanied by a high fever. Subcutaneous tophi do not occur in all cases. Osler pointed out that the ears should always be inspected in a case of polyarthrititis, as a chalky deposit will establish the diagnosis. Elevation of the blood uric acid is common although frequently early acute cases will show no such elevation. Others will present evidence of renal damage in the urine. Twenty-five years ago Williamson commented that the roentgen ray is of very little service from a diagnostic standpoint. Roentgenologists realize that small punched out areas in the margins of the bones may occur in other forms of arthritis as well as in gout and are therefore loathe to make a definite diagnosis.

The treatment of this disabling condition consists in the use of Colchicum, which is a specific drug. Improvement is usually rapid and often dramatic. In spite of rather widespread fear in its use, cinchophen is usually satisfactory in the treatment of gout. Occasionally patients taking cinchophen will develop a toxic involvement of the liver. Frequent urinalysis for urobilinogen will guard the physician against such a side action. Dietary measures should also be advised. Obesity should be avoided and the intake of purines radically reduced. Alcohol is forbidden; meat (liver, sweet breads, meat juices and extracts, fish and fowl), peas, beans, and mushrooms are strictly limited in the diet; protein may be supplied by means of eggs, cheese, and milk; cereals, green vegetables, fruits, butter, lard, tea, coffee, and cocoa are allowed.

In few diseases does the patient suffer more intense pain than in acute gout, and in none is the relief from pain so marked as following the use of Colchicum. The failure of physicians to recognize this condition is responsible for a great deal of needless suffering.

### Iowa State Medical Library

One of the services available to physicians of Iowa is the privilege of borrowing medical books and literature from the Iowa State Medical Library. Established in 1919 as a Department of the State Medical Library through the influence and combined efforts of Johnson Brigham, State Librarian; Judge H. E. Deemer; Drs. D. S. Fair-



child, E. E. Dorr, O. W. Criley, Walter L. Biering, W. W. Pearson, Gershom H. Hill; and other influential doctors of the state, it became a separate library in the reorganization of the state libraries in 1939.

The present librarian, Jeannette Dean-Throckmorton, M. D., came to the library in 1929 when it was composed of 9,000 books and 3,004 reprints; under her direction it now has 33,300 books and bound journals, over 100,000 unbound journals and an estimated 150,000 pamphlets and reprints. One hundred and ninety-four journals are received through paid subscriptions and 82 as gifts.

The Iowa State Medical Library was the first such organization established to mail out material to doctors upon request. Literature on specific subjects is carefully selected by the librarian when asked to do so via telephone, letter, card, or personal visit. Material is mailed to out-of-town patrons and also to local patrons, the borrower paying the postage. Bibliographies covering the entire literature (both in the English and foreign languages) are made for rare cases.

Doctors throughout the state are to be commended for their support of the library and its projects. Through their generosity, back files of journals have been filled, and rare books and books which the library was unable to purchase from state appropriation have been added. Because the library is a lending agency, it is desirable that two unbound and one bound copy of many of the publications be available. Money appropriated by the state is not sufficient to cover more than one subscription for each publication. Hence, the Iowa State Medical Library is dependent on doctors for additional copies necessary to render prompt and efficient service.

Medical books and journals given to the library which are not needed are listed with the Medical Library Association which has an exchange with over 300 medical libraries in the United States, Canada, England, Puerto Rico, and Hawaii. Exchanges direct with foreign libraries have been arranged with the Medical School Library, Dunedin, New Zealand; the Canterbury Medical Library, Christchurch, New Zealand; and the Royal Australian College of Surgeons, Melbourne, Australia.

Libraries in England suffered greatly through bombings; because the doctors of Iowa were generous in giving their old medical journals, it was possible to help the libraries of the Royal College of Surgeons of England, St. Thomas' Hospital, and the University at Bristol to replace lost medical literature. In return the library received journals, not only to replace current

journals lost in transit through enemy action and which were out of print but also to fill in gaps in early British publications. In August the Iowa State Medical Library sent to New York to be forwarded to the medical centers in Russia 5,200 journals. Preparation is now underway to ship to the American Book Center for War Devastated Libraries in Washington, D. C., approximately 7,500 journals which have been collected through the war years.

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### Mental Health—A National Problem

At the San Francisco session of the American Medical Association, the House of Delegates passed a resolution urging the medical profession to give increased leadership and support to research in the fields of mental disease, improved institutional care of the mentally ill, and adequately financed mental hygiene programs. The resolution itself reads as follows:

"Whereas, There is an urgent need in most of the states for well organized and adequately financed mental hygiene programs, for research activities in the field of mental diseases and for improved institutional care of the mentally ill; and

"Whereas, The medical profession should give increased leadership and support to such activities: therefore be it

*"Resolved*, That each state medical association be requested to take the lead in the development of an adequate statewide mental hygiene and mental disease program and to cooperate with other groups in stimulating public support in order that sufficient funds may be secured for the proper operation and maintenance of such activities."

Mental health is an increasingly important problem confronting our nation. It is estimated that 10,000,000 persons suffer from mental and nervous disorders. Compare this with an estimated 680,000 cases of tuberculosis, 125,000 cases of infantile paralysis, and 700,000 cases of cancer, and you see the magnitude of the load. A comparison of the funds raised in 1944 for these four diseases, however, is even more illuminating. For tuberculosis the average was \$2,205 per patient; for infantile paralysis, \$8,775; for cancer, \$144; but for mental and nervous disorders only three cents per case. It should be understood that the above figures represent voluntary contributions raised for the four diseases.

The American Medical Association has written all state medical associations asking that a committee on mental hygiene be created if such action has not already been taken. It suggests contacts with national mental hygiene organizations affli-

(Continued on page 459)

# VETERANS ADMINISTRATION

## MEDICAL PROGRAM OF THE VETERANS ADMINISTRATION DES MOINES, IOWA

In accordance with the new medical program established by General Hawley, the Dean's Committee of the University of Iowa School of Medicine took over on July 1, 1946, the supervision of medical activities and the residency program of the United States Veterans Administration, Des Moines.

The Dean's Committee, headed by Dean Ewen M. MacEwen and represented in Des Moines by Dr. Walter Bierring and Dr. Lester Powell, has now progressed to a stage where consultants in all medical specialties have been appointed. The residency program should be in full force within the next few weeks. Following a complete reconversion, it is estimated that the staff will consist of twenty-seven regular staff members, eighteen consultants, and twenty-five residents.

The hospital activities are supervised by Lt. Col. L. M. Maguire, who has a background of twenty-four years in the Veterans Administration. He is a graduate of Creighton Medical School. From 1935 to 1937 he was Chief of the Medical Service at the station in Minneapolis. From 1937 to date he has been Chief Medical Officer at Minneapolis, Minn., Portland, Ore., and Des Moines.

Dr. Daniel J. Glomset will be Chief of the Medical Service, which will have a capacity of two hundred and seven beds. The Medical Service is staffed by nine staff members, four consultants, and ten residents. Dr. Glomset is well known to the medical profession in Iowa.

Dr. Louis Palumbo is Chief of the Surgical Service. Dr. Palumbo was graduated from Loyola University School of Medicine in 1934, receiving his B.S., M.S., and M.D. Cum Laude. Following his internship and one and one-half years of duty with the Army, he became affiliated with the U. S. Public Health Service in 1937, and saw service not only in various public health installations but in the European and Pacific theaters during his wartime tour of duty. From July, 1944, to October, 1945, he was Medical Officer and Surgeon in charge on the U.S.S. General W. H. Gordon. Dr. Palumbo is a fellow of the American College of Surgeons (November, 1944) and a Diplomate of the American Board of Surgery (September, 1943). His service will consist

of two hundred and fifteen beds, with nine staff members, ten consultants, and eight residents.

Dr. K. R. Cross heads the laboratory service. Dr. Cross received his Doctor of Medicine degree from the College of Medicine, University of Iowa, 1939. After his internship he served his pathologic residency at the Receiving Hospital, Wayne University, during 1940 and 1941. From 1941 until November, 1945, Dr. Cross was in Military Service, primarily performing the duties of pathologist. For one and one-half years of his military service he was Commanding Officer and Pathologist for the advanced section of the Communication Zone Medical Laboratory. Following his return from overseas duty, Dr. Cross served at the Army Institute of Pathology as well as Lawson General Hospital, Atlanta, Ga. Following discharge, Dr. Cross was appointed to the staff, Department of Pathology, University of Iowa, where he remained until July, 1946. Dr. Cross is a Board equivalent and will probably take the pathologic board examination during the next session.

Although the Dean's Committee has now been in force a few months, the progress, insofar as the training of men and the institution of newer medical practices is concerned, is consistent with the desire that the veteran receive medical care second to none and that the Veterans Administration Center in Des Moines be established as one of the outstanding hospitals of the Veterans Administration.

Staff conferences scheduled for October are:

1. General weekly conferences every Monday, 8:30-9:00 a. m.—October 7, Surgical; October 14, Medical; October 21, G.U.; October 28, X-ray.
2. Surgical-Pathologic conferences—first and third Tuesdays, 3:45 to 4:30 p. m.
3. Surgical staff meetings—Journal Club, second Tuesday; staff meetings, fourth Tuesday, 3:30 to 4:30 p. m.
4. Medical staff meetings—every Friday, 11:00 a. m. to 12:00 noon.
5. Clinico-pathologic staff conferences held in auditorium twice monthly—second and fourth Thursdays, 7:30 to 8:30 p. m. Collation will be served.

All members of the medical profession are cordially invited to attend these conferences and participate in the discussion.



# WOMAN'S AUXILIARY NEWS

MRS. KEITH M. CHAPLER, *Chairman of Press and Publicity Committee*, Dexter, Iowa

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*President-Elect*—MRS. FRED MOORE, Des Moines

*Secretary*—MRS. CHARLES A. NICOLL, Panora

*Treasurer*—MRS. HENRY G. DECKER, 2908 Woodland, Des Moines

## FALL BOARD MEETING

**-Monday, October 21, Hotel Kirkwood**

The regular fall board meeting will be held at the Kirkwood Hotel, Des Moines, on Monday, October 21, at 10:30 a.m. with a luncheon at 12:30 p.m.

All members of the State Board and all county auxiliary presidents, please check this date on your calendar and plan to be in Des Moines for this meeting. In the near future you will receive a letter giving details and enclosing a card which you should return to me for luncheon reservations.

Bring your ideas and suggestions for strengthening our Auxiliary work over the state. Now is the time for us to plan our work so that we will have a good report for our state and national conventions next year. Next year at Atlantic City, N. J., the American Medical Association will celebrate its one hundredth birthday and the Auxiliary will celebrate its twenty-fifth. It should be a great occasion, and we want Iowa to have a good report.

Mrs. M. H. Brinker,  
President

## DOES YOUR AUXILIARY HAVE PROGRAM PROBLEMS?

The program problem for at least two meetings in each county auxiliary may be solved by adhering to the state program and providing one program on "Cancer" and another on "Handicapped Children."

Each Auxiliary member should own, read, and remember the contents of "Cancer: A Manual for the Public" which may be obtained free from the State Health Department.

Speakers, program and exhibit material on "Handicapped Children" may be obtained by writing Mrs. Dorothy Phillips, Executive Secretary of the Iowa Society for Crippled Children, 400 Plymouth Building, Tenth and Walnut Streets, Des Moines.

Two programs or a joint program on articles from *Hygeia* and *The Bulletin* would fulfill objectives of the National Auxiliary.

## NATIONAL HEALTH PROGRAM OF THE AMERICAN MEDICAL ASSOCIATION

Adopted by the Board of Trustees and the Council on Medical Service, Feb. 14, 1946

1. The American Medical Association urges a MINIMUM STANDARD OF NUTRITION, HOUS-

ING, CLOTHING AND RECREATION as fundamental to good health and as an objective to be achieved in any suitable health program. The responsibility for attainment of this standard should be placed as far as possible on the individual, but the application of community effort, compatible with the maintenance of free enterprise, should be encouraged with governmental aid where needed.

2. The provision of PREVENTIVE MEDICAL SERVICES through professionally competent health departments with sufficient staff and equipment to meet community needs is recognized as essential in a health program. The principle of federal aid through provision of funds or personnel is recognized with the understanding that local areas shall control their own agencies as has been established in the field of education. Health departments should not assume the care of the sick as a function, since administration of medical care under such auspices tends to a deterioration in the quality of the service rendered. Medical care to those unable to provide for themselves is best administered by local and private agencies with the aid of public funds when needed. This program for national health should include the administration of MEDICAL CARE, INCLUDING HOSPITALIZATION TO ALL THOSE NEEDING IT BUT UNABLE TO PAY, such medical care to be provided preferably by a physician of the patient's choice with funds provided by local agencies with the assistance of federal funds when necessary.

3. The procedures established by modern medicine for advice to the prospective mother and for ADEQUATE CARE IN CHILDBIRTH should be made available to all at a price they can afford to pay. When local funds are lacking for the care of those unable to pay, federal aid should be supplied with the funds administered through local or state agencies.

4. The child should have throughout infancy PROPER ATTENTION, INCLUDING SCIENTIFIC NUTRITION, IMMUNIZATION AGAINST PREVENTABLE DISEASE AND OTHER SERVICES INCLUDED IN INFANT WELFARE. Such services are best supplied by personal contact between the mother and the individual physician but may be provided through child care and infant welfare stations administered under local auspices with support by tax funds whenever the need can be shown.

5. The provision of HEALTH AND DIAGNOSTIC CENTERS AND HOSPITALS necessary to community needs is an essential of good medical care. Such facilities are preferably supplied by local agencies, including the community, church and trade agencies which have been responsible for the fine development of facilities for medical care in most American communities up to this time. Where such facilities are unavailable and cannot be supplied through local or state agencies, the federal government may aid, preferably under a plan which requires that the need be shown and that the community prove its ability to maintain such institutions once they are established (Hill-Burton bill).

6. A program for medical care within the American system of individual initiative and freedom of enterprise includes the establishment of VOLUNTARY NONPROFIT PREPAYMENT PLANS FOR THE COSTS OF HOSPITALIZATION (such as the Blue Cross plans) and VOLUNTARY NONPROFIT PREPAYMENT PLANS FOR MEDICAL CARE (such as those developed by many state and county medical societies). The principles of such insurance contracts should be acceptable to the Council on Medical Service of the American Medical Association and to the authoritative bodies of state medical associations. The evolution of voluntary prepayment insurance against the costs of sickness admits also the utilization of private sickness insurance plans which comply with state regulatory statutes and meet the standards of the Council on Medical Service of the American Medical Association.

7. A program for national health should include the administration of MEDICAL CARE, INCLUDING HOSPITALIZATION, TO ALL VETERANS, such medical care to be provided preferably by a physician of the veteran's choice, with payment by the Veterans Administration through a plan mutually agreed on between the state medical association and the Veterans Administration.

8. RESEARCH FOR THE ADVANCEMENT OF MEDICAL SCIENCE is fundamental in any national health program. The inclusion of medical research in a National Science Foundation, such as proposed in pending federal legislation, is endorsed.

9. The services rendered by VOLUNTEER PHILANTHROPIC HEALTH AGENCIES such as the American Cancer Society, the National Tuberculosis Association, the National Foundation for Infantile Paralysis, Inc., and by philanthropic agencies such as the Commonwealth Fund and the Rockefeller Foundation and similar bodies have been of vast benefit to the American people and a natural outgrowth of the system of free enterprise and democracy that prevail in the United States. Their participation in a national health program should be encouraged, and the growth of such agencies when properly administered should be commended.

10. Fundamental to the promotion of the public health and alleviation of illness are WIDESPREAD EDUCATION IN THE FIELD OF HEALTH and the widest possible dissemination of information regarding the prevention of disease and its treatment

by authoritative agencies. Health education should be considered a necessary function of all departments of public health, medical associations and school authorities.—*Bulletin of the Woman's Auxiliary to the American Medical Association, May, 1946.*

### GALLUP POLL

A recent report of a poll taken by the American Institute of Public Opinion, of which Dr. George Gallup is director, in an effort to determine the thinking of the public on the question of compulsory health insurance, revealed that public opinion "has not crystallized very definitely as yet." The report stated that a great majority of people think the idea of having insurance against the costs of medical, dental and hospital care is a good one but have not decided how to pay for these expenses under such a plan.

Some interesting facts were determined by the survey:

1. Fewer than four in every ten persons had heard or read about the Wagner-Murray-Dingell compulsory health insurance bill.

2. The typical American family estimates that it spent about fifty dollars last year to cover all doctor, dental and hospital bills.

3. The majority declare they would not be willing to pay any more for medical insurance than they now pay for doctor and hospital bills and about half of those polled say they would not be willing to pay as much.

4. Opinion is almost evenly divided as to whether people would get better medical care than they are now getting if the government took over the job of administering a health insurance program.

There was nothing in the report to show any great public demand for state medicine.—*Polk County Medical Society Bulletin, June-July, 1946.*

### SO YOU THINK IT'S NEW!

By Wilfred Funk

The Cesarean operation, often said to be named after Julius Caesar, was performed four hundred years before the Emperor's birth.

Burnt sponge, which contains iodine, was used to treat goiter 3,400 years ago.

In the early Christian era, Herophilus, an Alexandrian physician, was lecturing on the blood vessels and nervous system. It was he who gave our present names to many parts of the human anatomy and to most of the coats of the eye.

More than 4,000 years ago the Babylonian king, Hammurabi, established socialized medicine and fixed the fees of physicians according to the means of the patient.

For an anesthetic, three millenniums ago, the sur-



geon used wine drugged with mandrake root and opium.

Four hundred and fifty years before Christ the Greek physician, Hippocrates, tied off arteries during an operation and sewed up wounds with a needle and thread.

Major operations were performed 2,000 years before Hippocrates was born. Representations of these operations, which can still be seen, were carved on stones in the city of Memphis.

A clay tablet more than 3,000 years old bears this prescription for a laxative: "The berries of the castor-oil tree—chew and swallow down with beer in order to clear out all that is in the body."

In 1500 B. C., the citizens of Thebes were complaining that there were no longer any good old family physicians. Every one was a specialist. "The practice of medicine," writes Herodotus, the Greek historian, "is so divided among them that each physician is a healer of one disease and no more. All the country is full of physicians, some of the eye, some of the teeth, some of what pertains to the belly."

The old time Greek doctor set fractures, adjusted dislocations, filled teeth, pulled them, and made and fitted sets of false teeth in the mouth.

The first modern looking hospital was built in Rome on an island in the River Tiber before the day of Julius Caesar. It was designed on our corridor plan, with a reception hall, administration offices, and even what seems to be an isolation ward for contagious diseases.

Fees were high nineteen centuries ago. In Rome a certain doctor, Quintus Stertinus, frequently received a fee of \$10,000 for curing a wealthy patient.

The earliest sanitarium was at Epidaurus in ancient Greece. Patients who could used a running track and worked on a punching bag made of a bladder covered with leather. Others merely sun bathed or took the waters.

The old boys were sun-bathing fans. The Roman naturalist, Pliny the Elder, who lived in the first century A. D., advises in his Natural History that "the sun is the best of the remedies which one can apply to oneself." And the disciples of Hippocrates say in effect: "It is the back, especially, that should be exposed to the sun . . . for the nerves . . . are principally to be found in that region, and if these nerves are in a state of health, the whole body is rendered healthy."

Yes, these modern inventions and practices of ours, this shining civilization that we brag about—after all, they seem a little tarnished by time, don't they?

—*Hygeia*, February, 1946.

## SPEAKERS BUREAU RADIO SCHEDULE

WOI—Wednesdays at 2:45 p. m.

WSUI—Thursdays at 2:45 p. m.

October 2-3	High and Low Blood Pressure	Hyman M. Hurevitz, M.D.
October 9-10	Diseases of the Blood	Regis E. Weland, M.D.
October 16-17	Choosing Medicine as a Career	Ewen M. MacEwen, M.D.
October 23-24	Pneumonia	Robert W. Johnson, M.D.
October 30-31	Behavior Problems of Children	Dennis H. Kelly, M.D.

## MENTAL HEALTH—A NATIONAL PROBLEM

(Continued from page 455)

ated with the National Committee for Mental Hygiene, 1790 Broadway, New York 19. It also asks state associations to work in conjunction with interested lay groups.

Here in Iowa we have an Iowa Society for Mental Hygiene created about three years ago. Dr. Walter L. Bierring is president; Dr. Andrew H. Woods, vice-president; Dr. Wilbur Miller, treasurer; and Dr. Norman D. Render, executive director. Dr. Robert S. Shane has been very active in appearing before lay groups to explain the purpose of the organization and to enlist support. Dr. Shane's work with Selective Service made him fully aware of the need for such a group, and since his retirement from military service he has devoted time and effort to organizational work for the Society for Mental Hygiene.

Within the State Society, the Committee on Medical Service and Public Relations has also kept in touch with the problem. The committee appointed by Governor Blue to study the mental hospitals reported to this committee and asked its help. One member of the committee, Dr. Donald C. Conzett, has been assigned responsibility for the mental health program. He is studying the reports and recommendations on the state mental hospitals, cooperating with the Coordinating Committee of lay persons interested in the problem, and will report back to the main committee from time to time.

The problem is too great for one man or for one committee of seven members, however. Each physician in Iowa probably encounters it in some phase in his daily practice. Each physician should be aware of the societies which are organized to work with the problem and should help support them. The leadership of the medical profession is needed if progress is to be made in our care of the mentally ill.

# HISTORY OF MEDICINE IN IOWA

*Edited by the Historical Committee*

DR. WALTER L. BIERRING, Des Moines, Chairman

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DR. CHARLES L. JONES, Gilmore City

DR. CLYDE A. HENRY, Farson

DR. LESTER C. KERN, Waverly

## The Iowa Doctor One Hundred Years Ago

Walter L. Bierring, M.D., Des Moines

In this centennial year of Iowa history it is well to look back into our yesterdays and recall the pioneer doctor and his part in the settlement of a new state. He too was a frontiersman who helped to blaze new trails, and he contributed no small share to the progress and happiness of his day.

The doctor came with the early settlements along the Mississippi River soon after 1833, and in the succeeding decade followed the course of the Cedar, Iowa, and Des Moines Rivers inland as far west as Fort Des Moines. He brought the culture and scientific learning of that period from his home in the older states to the eastward, seeking a new home in the prairie state and widening his field of usefulness.

Success in those days meant a degree of personal sacrifice, self-reliance, and courage with an ability to meet emergencies rarely seen in this more modern day. It was a time when men were men and doctors helped make history in Iowa.

In the early writings of the Iowa territory two names of physicians appear, the first being that of Dr. Samuel C. Muir, an army surgeon and graduate in medicine from the University of Edinburgh who lived and practiced for a time, about 1820, at a settlement of traders near the Dubuque lead mines. Later he resigned from the army because he was married to an Indian woman and settled on a small farm near the future town of Keokuk. In 1832 it is recorded that he took part in the laying out of the city of Keokuk and soon afterwards died there of cholera.

Next appears the name of Dr. Isaac Galland who settled on the west bank of the Mississippi River in 1829 at a point called Nashville near Fort Madison. He practiced at various times at Nashville, Montrose, and Fort Madison where he died in 1858. He is described as "a versatile and picturesque character, a brilliant physician being specially successful in the treatment of cholera." One of his contributions was a medicine chest or

box on which was printed in red letters "Dr. Isaac Galland's Family Medicines," which contained the usual and ordinary remedies used by the doctors in those days and was placed in nearly every cabin in his wide field of practice. He also established in 1836 the second newspaper published in Iowa called "The Western Adventure." It was sold two years later and remained the "Madison Patriot." In 1830 a daughter of Dr. Galland was born, being the first white child born in Iowa territory.

The first pioneer physician to locate in Iowa for the distinct purpose of practicing medicine was Dr. Frederick Andros, who came to Dubuque in 1833. He was a native of Massachusetts and a graduate of the literary department of Brown University in 1822 and the medical school of that institution in 1826, arriving in Dubuque seven years later. In 1854 he changed his location to Garnaville and in 1861 he moved to McGregor. In 1880, at the age of 80, he decided that Iowa was becoming "too civilized" and moved out to Dakota "to grow up with the country" where he practiced ten years. One year later he died in Minneapolis.

The late Dr. Henry H. Clark of McGregor who was associated with Dr. Andros during the period 1870 to 1880 describes him "as evidently far superior in intelligence and ability to the average physician of his day, but at the same time he was a typical frontiersman. In his practice he always wore a high silk hat in which he carried his letters, red bandanna, cigars, stethoscope, and either a clean or dirty collar."

With the coming of Dr. Andros to Dubuque the history of the practice of medicine in Iowa may be said to have had its beginning. Three other pioneer physicians of Dubuque are deserving of mention. In 1834 Dr. Stephen Langworthy (grandfather of the present Henry G. Langworthy) arrived in Dubuque to join his four pioneering sons who had recently opened up the old



lead mines discovered by Julian Dubuque about 1788. He was a graduate of Yale College and had served as an army surgeon in the War of 1812. It is recorded "that he traveled almost entirely by horseback, and for many years on the same old white horse along infrequent trails and streams, carrying such instruments and drugs as might be needed in two saddle bags." He had been married twice and had twenty-two children. His death occurred in Dubuque in 1848.

Dr. John W. Finley, a native of North Carolina, came to the mining country and settled in Dubuque in 1836. He obtained his medical education under several preceptors and at the Medical College of Ohio, Cincinnati, where he was graduated in 1836. While in the medical school he entered the office of Dr. Samuel D. Gross, then Demonstrator of Anatomy, being his first office student. In later years when Dr. Gross was professor of surgery at the University of Louisville, Dr. Finley made frequent visits to Louisville for additional instruction by his former teacher.

Dr. William Watson of Dubuque presented a biographic sketch of Dr. Finley before the Iowa State Medical Society in 1878 from which is quoted: "Standing over six feet, he was well calculated to endure the labor that fell to his lot. During the earlier years of his practice, he made long journeys to the scattered settlements of the interior, often going a distance of forty or fifty miles over trails and across the country. He was engaged in active practice nearly forty years, including three years of service as surgeon of the Thirty-seventh Iowa Infantry in the Civil War. He planned to build a hospital, and after his death arrangements with his estate made it possible to carry out this purpose; Finley Hospital stands today as one of the crowning achievements of his life."

In 1844 Dr. R. S. Lewis settled in Dubuque and conducted an active practice in that city for twenty-five years. The biographic data regarding him are rather meager, but it is stated "that he was honorable and unassuming, enjoying the respect of all he met." Later he was associated with Dr. William Watson, one of the leading physicians of Dubuque, and died in 1869. In 1860 he served as president of the Iowa State Medical Society.

Dr. Asa Horr came to Dubuque in 1847 soon after his graduation from the medical department of Western Reserve University, Cleveland. He is referred to as "the most distinguished and probably most scholarly of early Iowa physicians." He early showed an interest in the sciences aside from medicine, becoming an active member of the American Association for the Advancement of

Science. He also made valuable observations in meteorology from the Smithsonian Institute at Washington.

He was not without skill and courage in surgery, however. In 1875 he removed a large solid tumor of the left ovary together with a fibroid tumor of the uterus at the same operation; the patient made a good recovery. Dr. Horr performed other difficult operations such as were regarded legitimate in those days. He died in Dubuque June 2, 1896, at the age of 72 years.

After the town of Davenport was opened for settlement in May, 1836, the first physician to locate there was Dr. E. S. Barrows, the town having a population of one hundred. Dr. Barrows was the leading physician in Davenport for many years. For the first year and a half after he began practicing, the nearest physician on the South was in Burlington and on the North, Dubuque, nearly one hundred miles each way. When the Scott County Medical Society was organized in 1856, he was chosen president, and in 1859 he was chosen president of the Iowa State Medical Society.

Dr. Barrows in 1847 became the preceptor of John Forrest Dillon, who was to have a professional influence on the development of medical education in Iowa and to gain eminence in another profession, that of law. Dr. Dillon was graduated in medicine in February, 1850, from the College of Physicians and Surgeons of the Upper Mississippi, then located at Davenport, at twenty years of age. He practiced medicine for a year at Farmington, Iowa, during which time he became a charter member of the Iowa State Medical Society when it was organized at Burlington in June, 1850. He was the author of the leading article entitled "Rheumatic Carditis with Autopsical Examination," which appeared in the opening number of the first medical journal published in Iowa, *The Western Medico-Chirurgical Journal* issued Sept. 1, 1850.

Soon afterward, because of a certain physical disability, he gave up the practice of medicine and began the study of law, being admitted to the bar without attending a law school. He served for a number of years as county attorney of Scott County and in 1865 was elected to the Supreme Court of Iowa, becoming Chief Justice. In 1869 he was appointed United States circuit judge by President Grant, from which office he resigned in 1879 to accept the professorship of law at Columbia University, New York City, when he was 49 years of age.

In 1869, in association with Dr. W. F. Peck of Davenport and the Honorable John P. Irish of Iowa City, he was one of the founders of the

Medical Department of the State University at Iowa City. In a letter written in 1908 by Dr. John T. Dillon, he refers to his preceptor as follows: "Dr. Barrows was a prominent physician and surgeon, having been a surgeon of the United States Army during the Seminole Indian War. He had wonderful skill in diagnosis and was a bold and successful practitioner. He made very little use in his ordinary practice of any other remedies but calomel, blue moss, Dover's powder, and compound cathartic pills." Dr. Barrows died in Davenport in 1863.

After Dr. Barrows, the outstanding pioneer physician of Davenport was Dr. J. M. Witherwax who located there in 1838, three years after graduation from the College of Physicians and Surgeons of New York City. For thirty years he was the leading physician of the city including three years of service as surgeon in the Civil War.

In 1853 he was elected president of the Iowa State Medical Society. His death in 1869 was due to chronic lead poisoning from the use of a hair restorer containing large amounts of lead acetate. Although he had a flowing white beard and abundant hair on his head, he faithfully rubbed this restorer into his hair daily for several years before his death. This case was fully described in the *Transactions of the State Medical Society* of 1870 and later published in two eastern medical journals.

In 1846, Dr. C. C. Parry, one of the interesting and scholarly physicians of early Iowa history, began the practice of medicine in Davenport. Of English birth, he was graduated from Union College, New York, with honors in 1842, and in 1846 received his M. D. degree from the College of Physicians and Surgeons, Columbia College, New York. While keenly interested in the practice of medicine, serving as one of the first secretaries of the Scott County Medical Society and as its president in 1859, he was destined to become one of the leading botanists of his day. He became the intimate friend of Dr. Asa Gray and other prominent botanists. Many plants bear his name, including the beautiful blue spruce of our gardens. He collected one of the finest private herbaria in this country, comprising 18,000 classified specimens representing nearly 6,800 species. This was later purchased by Iowa State College at Ames.

In 1832, Dr. William R. Ross with Mr. Benjamin Tucker platted the city of Burlington, and a year later Dr. Ross brought a stock of goods to the new settlement. While the first physician to locate in the new town, he evidently was more occupied with trade than the practice of medicine. He became the enrolling clerk of the Wisconsin

Legislative Assembly, and when the Territory of Iowa was created in 1838, he held this position at the first assembly in Burlington, Nov. 12, 1838.

Several physicians came to Burlington during those early years but remained but for a short time. The first physician that settled in this new frontier village who was to gain distinction in Iowa medicine was Dr. Enos Lowe. He arrived in 1837 soon after graduation from the Ohio Medical College at Cincinnati. Dr. Lowe is referred to as a man of marked ability and great ability. He soon became identified with political and economic affairs. He was a member as well as presiding officer of the convention that adopted the constitution under which Iowa was admitted to statehood in 1846. That he also gained high recognition as a physician is evident by his being selected the first president of the Iowa State Medical Society when it was organized in Burlington in June, 1850.

Another interesting medical pioneer of this area was Dr. John D. Elbert who came to the thriving young village of Keosauqua on the Des Moines River in 1840. Born in Kentucky in 1806, the son of a physician, he spent his youth in Logan County, Ohio, and there obtained his early education in the common schools that the neighborhood afforded. He attended medical lectures at Ohio Medical College in Cincinnati and received his diploma and license in 1829 from the hands of Dr. Daniel Drake. He practiced in Ohio until 1840 when he sought the "far West" for his future professional activities.

By reason of his medical ability and boundless energy, he soon gained leadership in the new community. In 1842, he was elected to the Territorial Legislature and subsequently became its president. In addition to his license from Ohio Medical College, he had two honorary degrees conferred upon him, one by the Medical Faculty of Missouri University and the other by the trustees of the University of Pennsylvania. As a surgeon, he acquired an extensive reputation in southern Iowa and northern Missouri for his skill as an operator and for his general management. Dr. Elbert was a charter member of the Iowa State Medical Society and elected its third president in 1852. He died in Keosauqua in 1865 at the age of 59.

Another interesting pioneer physician was Dr. George Reeder who came to the new settlement at Muscatine in 1839. The well known Iowa historian, Irving B. Richman, has left us this record: "Dr. Reeder was a graduate of William and Mary College at Williamsburg, Va., and the medical department, University of Maryland, Baltimore, in 1839. He engaged in the practice of medicine



with unusual success and was regarded by those who knew him as one of Nature's Noblemen—a man of high character, a fine scholar, and as a physician had few equals in this part of the state. He was a charter member of the Iowa State Medical Society when it was organized in 1850 and was its president in 1854.

"Though a southerner by birth, he held the integrity of the Union paramount to all other considerations. Accordingly, although not in good health, he accepted an appointment as Surgeon of the Second Iowa Cavalry, entering the service in October, 1861. The hardships of campaigning proved too severe for his strength, and he was compelled to resign on the second of June, 1862. He reached home almost exhausted and departed this life on the twentieth of June, 1862, ten days after his return, at the age of 42 years."

Dr. Edward Whinery located in Fort Madison in 1840 soon after his graduation from Transylvania University. It is recorded that he was known as a skillful and daring surgeon. Although constantly driven by a large though not lucrative practice, his lack of business ability was as conspicuous as his professional skill was memorable. In the supposed flush time of gold at a premium, he habitually charged \$1.50 a visit. Of Quaker ancestry he was vehemently antislave in attitude and an active supporter of Lincoln. He died as the result of a runaway accident, Feb. 25, 1868.

At the meeting of the Iowa State Medical Society in Des Moines on Feb. 6, 1868, just nineteen days before his death, he reported a case occurring in March, 1865, of rupture of the uterus during labor, and successful recovery by abdominal incision and delivery of a live baby. There was no local infection or peritonitis resulting. This showed a man of courage and resourcefulness who could, under the most unfavorable conditions, undertake an operation which would today be regarded as a surgical victory in the best equipped hospital.

The name of Dr. James Moore Robertson appears frequently in early Iowa records. He was born in Washington County, Pa., Oct. 14, 1804. He received his literary education at Jefferson College, Canonsburg, Pa., and was graduated in medicine from Jefferson Medical College, Philadelphia, in 1827. After practicing eleven years in Pennsylvania and Ohio, he removed to Iowa Territory at Burlington in 1838. After a few years' practice in Burlington, he located at Columbus City which he helped to plat. He practiced his profession until 1870, moving to Muscatine where he died in 1878. While in Burlington and Columbus City, Dr. Robertson did a practice extending from Cedar

Rapids to Keokuk mostly on horseback with an expenditure of strength and energy and with an endurance that can hardly be appreciated by the practitioner of today.

Dr. Robertson did much to help organize a new country and make treaties with the Indians whose language and customs were well known to him. He was a member and served as vice president and treasurer of the Iowa State Medical Society. In 1865, he was elected State Senator, serving four years. In personal appearance Dr. Robertson is described as tall and erect. He wore a tall hat and blue broadcloth clothes. In appearance and address he was the type of a medical gentleman. The strong ancestral Scottish-English blood of Dr. James Moore Robertson was manifest in the son, Dr. William S. Robertson, and in his grandson, Dr. Charles M. Robertson, both of whom rose to distinction in Iowa medicine.

It is interesting to note the type of physicians that practiced in Johnson County and Iowa City one hundred years ago. The first physician to locate within the present limits of Johnson County was Dr. Henry Murry who came to Iowa City in 1838, the year that the Iowa Territory was organized. Dr. Murry was born in Dublin, Ireland, in 1816, and was graduated from the medical department of the University of Louisville. It is recorded that he was a successful physician and surgeon and performed many "capital" surgical operations. He was at one time coroner and county physician. His death occurred in Iowa City on May 9, 1880.

The second physician to locate in Johnson County was Dr. Ezra Bliss who came to Iowa City in 1839. He was of New England birth and a graduate of Castleton Medical College in Vermont in 1837. After a few years of successful practice he moved to New York City, spending much of his time in Europe.

Dr. Jess Bowen arrived in Iowa City in 1840. He was born in Virginia in 1806, coming to Iowa from Indiana where he had served as state senator. Dr. Bowen did not limit himself to the practice of medicine but was active in public affairs. When the capital was moved from Iowa City to Des Moines in 1857, because of the bad roads and absence of bridges over many of the streams, the problem of moving state property, principally four safes, was a difficult one. Finally Dr. Jess Bowen accepted the contract, and after many days of hard and tedious work all the property was safely delivered in Des Moines. Dr. Bowen was elected State Senator from Johnson County in 1860, and during the Civil War he was Adjutant General of the state.

Dr. William Vogt was one of the most noted of the early Iowa practitioners of medicine. His activities were limited to his profession. He came to Iowa City in 1846, having been born in Prussia where he received his medical education. It is said that he never presented a bill for medical services, but devoted himself to his patients and his practice without thought of money compensation. His modesty, his willingness, and his devotion to render service left a place never quite filled in the professional annals of Iowa City. He died in Iowa City in August, 1873, at 55 years of age. From the *Iowa City Daily Press* of Aug. 25, 1873, the following is abstracted:

"It is wonderful how thoroughly this gentleman of foreign birth and education won the affectionate esteem of the people where he chose his American home. For twenty-seven years Dr. Vogt has been of this people. Pioneer with them in the early days, a generation born since he came, had learned each gentle, manly way that recommended him to the generation of which he was and with which he has gone the silent journey. He came to America in 1846, a stouthearted man of 28 years, to follow that destiny which led him to first rank in his profession, in the confidence of the worthy and in the love of all. His professional labors were intense. Worn by them he sought rest six years ago by a European tour. Appointed a commissioner for Iowa to the World's Exposition at Paris, he crossed the sea and spent nearly a year abroad.

"Amongst the students of the State University he was always the favorite physician, and many a young man and woman has gone back to study, clad not only in restored health, but stored with his rich thoughts and sage suggestions. Dr. Vogt was an active promoter of the interests of the medical department of the University. For many years he served on the public school board of the city.

"The obsequies were held in St. Patrick's Church, Rev. Father Rice officiating. In the funeral cortege, the hearse was followed by the doctor's team attached to the empty vehicle, draped and led by Messrs. Kimball and Shafer, students of the University Medical Department. The services were attended by Dr. W. F. Peck, Dean and Drs. Shrader, Clapp, and Pryce of the Medical Faculty.

"As the cortege moved through the streets to the cemetery, the sick people who were the objects of his care, added their tears to the libation in his memory."

A number of pioneer physicians located in Washington County of which there is but a limited record. Dr. Samuel Nealy came in 1840. He was a graduate of Jefferson Medical College

and served as a surgeon with the American forces in the War of 1812. He died in 1871. Dr. W. H. Rousseau came to Washington in 1844 and read medicine with Dr. W. B. Stone, later being graduated from the College of Physicians and Surgeons of Keokuk. He was a charter member of the State Medical Society and practiced in Washington until his death in 1893. Dr. William McClelland came to Washington in 1845 and Dr. O. H. Prizer to Brighton in the same year. Dr. McClelland is said to have introduced Fowler's solution in the treatment of malarial fever because of the high price of quinine.

The physician who became most prominent of the pioneers of Linn County was Dr. Henry Ristine who came to Marion in 1842. A few years later he moved to Cedar Rapids, practicing medicine in the two cities for a period of fifty-one years. Born in Albany, Ky., in 1818, he attended Wabash College, Crawfordsville, Ind., but was not graduated. He practiced first with his brother-in-law, Dr. Magnus Holmes, at Marion, and in 1850 attended a course of lectures at Ohio Medical College in Cincinnati, being graduated in 1851. His activities were wholly welfare, social, and professional in character. His reputation as a surgeon gained him the appointment as chief surgeon for the Burlington, Cedar Rapids and Northern Railway and district surgeon for the Chicago and Northwestern Railway.

Dr. Ristine early recognized the need of a hospital in a growing community which had for many years depended on home treatment for serious medical and surgical cases. Though such institutions were as yet difficult to organize, with the assistance of his friend, Dr. Green, St. Luke's hospital had its beginning. Dr. Ristine was a member of the first consulting staff. He was a leading influence in organizing the Linn County Medical Society in 1859 and was elected president of the Iowa State Medical Society in 1877. His son, Dr. John M. Ristine, became associated with him in practice after being graduated from Bellevue Hospital Medical College in 1876, and for seventy-seven years the Ristines were recognized as among the leading physicians and surgeons of eastern Iowa.

Another pioneer physician of which there is little record is Dr. Thomas Sweter who settled in the small village of Salem, Henry County, in 1845 and practiced there up to the time of his death in 1870. He was twice elected president of the State Medical Society, first in 1855 and again in 1857. The only other member who served two terms as president was Dr. J. C. Hughes of Keokuk who served in 1856 and 1865.

Brief mention should be made of Dr. Edwin



James, distinguished explorer and botanist who lived on a farm near Rock Creek in Des Moines County from 1836 to 1861 and practiced medicine in the neighborhood without making any charge for his services. Dr. James was graduated in 1816 at Middlebury College, where he specialized in botany. He then studied medicine with his brother in Albany, became a doctor, and with a background of European training received an appointment as Botanist and Surgeon with the Major Long expedition to explore the eastern slope of the Rocky Mountains. On July 13, 1820, he scaled Pike's Peak to the summit. Major Long in his report recommended that the mountain be renamed as James Peak, claiming that Lieutenant Pike had neither climbed to the top nor observed it from an adjacent peak. Dr. James classified the flora of the Rockies, named the columbine, the Colorado state flower, and became nationally recognized as one of the leading botanists of his period.

He became proficient in several Indian languages and rendered valuable service in treaty negotiations. He served as army surgeon at Fort Crawford, Fort Mackinac, and Fort Brady (Detroit) but tired of army life and settled on a farm of 320 acres near Rock Creek in Des Moines County where he spent the rest of his days until his death in 1861. In 1930, the Des Moines County Medical Society placed a tablet with appropriate inscription on his grave.

Two pioneer physicians came to Mahaska County about 1845, Dr. John J. F. Hopkins and Dr. F. W. Coolbridge, both graduates of reputable medical colleges.

Dr. E. S. Reinhart, a graduate of Jefferson Medical College, came to Oskaloosa in 1846. When the Mahaska County Medical Society was formed in 1856, Dr. Reinhart was elected its first president. He was a cultivated gentleman enjoying the confidence of the public and the affection of the medical profession of his county. He died of pulmonary tuberculosis in 1875.

The first physician to locate in Wapello County was Dr. Charles C. Warden who came to Ottumwa in 1843. When the Wapello County Medical Society was organized in 1853, he was elected its first president. After an active practice of thirteen years he engaged in the dry goods business but continued his interest in medical affairs until his death in 1902. He served for a number of years as president of the city board of education and as a member of the Board of Trustees of Iowa State College.

On Oct. 11, 1845, the reservation centering around Fort Des Moines, the present site of the

city of Des Moines, was first thrown open for actual settlement. A military post had been established in 1843. This fort was unique in being the only military post established by the government for the protection of the Indians and their interests.

The first civilian physician to practice in Polk County was Dr. Thomas K. Brooks who came to Fort Des Moines in 1845. In the beginning he combined farming with practice but soon devoted himself entirely to the practice of medicine. He was appointed the second postmaster of Fort Des Moines in 1846. When he died Feb. 28, 1868, the General Assembly, then in session, closed one day in respect to his memory, and members of both houses attended his funeral.

Dr. H. H. Saylor, "known all over the county," came in 1846 and located in a cabin on the Saylor bottoms, later moving to Fort Des Moines and actively practicing medicine until his death in 1874.

Dr. Pierce H. Fagen arrived in Fort Des Moines in June, 1846. He was a graduate of the McDowell (Eclectic) College of Medicine of St. Louis and came to his new location with the prestige of considerable experience in medical teaching and hospital work in St. Louis and Cincinnati. He soon acquired a large practice, but he remained only six years, moving to California in 1852.

Special mention should be made of Dr. Francis C. Grimmel who arrived with his family Oct. 15, 1846, coming overland by wagon from Perry County in Ohio. He is referred to as a typical frontiersman, physician, and "everything else" to the new community. Dr. Grimmel established the first drugstore at the corner of Sixth and Grand Avenues, which became the business and political center just as his home became the center of all church and social activities. In 1848 he built the first frame residence in Fort Des Moines on the present site of St. Ambrose Cathedral. Later in 1856-57 he built the first brick residence in Des Moines where the Victoria Hotel now stands. The great social event of 1847 was the Grimmel-Casady wedding, being the marriage of Dr. Grimmel's daughter to Mr. P. M. Casady, who was to become one of the leading citizens of the community. Dr. Grimmel died in 1862.

There is no record of physicians locating farther west than Fort Des Moines before 1850.

In this brief historical review not all of the pioneer doctors of one hundred years ago could be included. The purpose was to present certain outstanding characters to show that men educated as physicians had much to do with the development of this state. They brought with them the begin-

nings of general culture, and by reason of their cultivated power of observation, freedom from prejudice and superstition, and knowledge of the dangers surrounding the early settler these doctors were peculiarly fitted to aid in the pioneer work of the new settlement.

Significant events occurred a century ago that had a professional influence on the practice of medicine in America. In 1843, Dr. Oliver Wendell Holmes read a paper entitled, "The Contagiousness of Puerperal Fever" that ushered in a new era in obstetric practice. On Oct. 16, 1846, Dr. John Collins Warren performed the first surgical operation at the Massachusetts General Hospital in Boston under ether anesthesia, the same being administered by Dr. W. G. T. Morton, dentist. In May, 1846, the National Medical Convention was held in New York City which resulted in the organization of the American Medical Association one year later in Philadelphia.

Dr. John F. Sanford of Farmington and later of Keokuk attended the third meeting of the American Medical Association in Boston in May, 1849, when an appeal was made for all states to organize state and county societies. This made such a profound impression upon Dr. Sanford that on his return home he wrote many letters to physicians urging them to meet in Burlington the coming May for the purpose of organizing the Iowa State Medical Society which was accomplished June 19, 1850.

It was the inspiring leadership of Dr. Sanford and others that brought the first medical school to Iowa in 1849—the College of Physicians and Surgeons of the Upper Mississippi at Davenport. One year later in 1850 it was moved to Keokuk to become the College of Physicians and Surgeons of Keokuk, also being designated as the Medical Department of the State University until 1869 when a medical school was established at Iowa City. Again through the influence of Dr. Sanford the first medical journal was published in Iowa, *The Western Medico-Chirurgical Journal*, issued Sept. 1, 1850.

Though a fine group of notable practitioners located in Iowa before the year 1850, in the succeeding two decades with the constantly increasing emigration an equally notable group of high minded physicians settled within the borders of the new prairie state, physicians destined to have an important part in the development of Iowa medicine. They, too, to a large extent were pioneers and with equal fortitude weathered the privations and trials of the frontier. The lives and achievements of

these pioneer Iowa doctors are more than a tradition. In part they embody the foundation of the professional heritage which we enjoy today.

#### PHYSICIANS' MONTHLY CLINICAL CONFERENCES

The clinical staff of the College of Medicine has set aside the last week of each month for clinical conferences of special interest to the practicing physicians under a plan similar to that which has been conducted by the Department of Urology for several years. This announcement has been made by Dr. E. M. MacEwen, Dean, and Dr. J. T. McClintock of the Division of Postgraduate Studies.

Special operative clinics or ward walks and round table conferences will be held on each day of the week in which the last Wednesday of the month occurs, according to the following daily program: Monday—general surgery; Tuesday—obstetrics and gynecology; Wednesday—urology; Thursday—orthopedic surgery; Friday—internal medicine, neurology, dermatology; Saturday—pediatrics.

The Clinical Conference week will be held each month during the year except in December, January and February when weather conditions are apt to be such as to make automobile travel uncertain. The morning hours from 9 a.m. to 12 noon will be devoted by members of the departments to operative and amphitheatre clinics or ward walks according to the type of cases to be presented. Round table conferences will be held in the afternoon from 1:30 to 4:30. Visiting physicians are urged to present for general discussion some of their own difficult clinical problems. By so doing the conference will be far more practical and helpful to all persons attending. A department representative will act as chairman.

The members of the medical staff are pleased to have the physicians visit them at any time, but a special invitation is extended to all doctors to be present during the monthly clinical conference week. It is hoped that by setting up a definite program as outlined above, they will be able to arrange their work and visit the hospital on one or more days during the conference week.

The monthly clinical conferences will begin on Monday and end on Saturday as follows: 1946 schedule—October 28 to November 2, November 25 to 30, no program in December; 1947 schedule—no program in January or February, March 24 to 29, April 28 to May 3, May 26 to 31, June 23 to 28, July 28 to August 2, August 25 to August 30.

#### CHANGE OF ADDRESS

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# THE JOURNAL BOOK SHELF

## BOOKS RECEIVED

**ANESTHESIA IN GENERAL PRACTICE**—By Stuart C. Cullen, M.D., Head of Division of Anesthesiology, Department of Surgery, State University of Iowa Hospitals; Associate Professor of Surgery (Anesthesiology), State University of Iowa College of Medicine. The Year Book Publishers, Inc., Chicago, 1946. Price, \$3.50.

**DISEASES OF THE RETINA**—By Herman Elwyn, M.D., Senior Assistant Surgeon, New York Eye and Ear Infirmary. The Blakiston Company, Philadelphia and Toronto, 1946. Price, \$10.

**ELECTROCARDIOGRAPHY IN PRACTICE**—By Ashton Graybiel, M.D., Capt., M. C., U.S.N.R. Co-ordinator of Research, U. S. Naval School of Aviation Medicine, Pensacola, Florida; and PAUL D. WHITE, M.D., Lecturer in Medicine, Harvard Medical School, Physician, Massachusetts General Hospital; with the assistance of LOUISE WHEELER, A.M., Executive Secretary, the Cardiac Laboratory, Massachusetts General Hospital; CONGER WILLIAMS, M.D., Assistant in Medicine, Harvard Medical School and Massachusetts General Hospital. Second edition. W. B. Saunders Company, Philadelphia, 1946. Price, \$7.00.

**PERIPHERAL VASCULAR DISEASES**—By Edgar V. Allen, B.S., M.A., M.D., M.S. in Medicine, F.A.C.P., Division of Medicine, Mayo Clinic, Associate Professor of Medicine, Mayo Foundation, Graduate School, University of Minnesota; Diplomate of the American Board of Internal Medicine; NELSON W. BARKER, B.A., M.D., M.S. in Medicine, F.A.C.P., Division of Medicine, Mayo Clinic, Associate Professor of Medicine, Mayo Foundation, Graduate School, University of Minnesota; Diplomate of the American Board of Internal Medicine; and EDGAR A. HINES, JR., M.D., B.S.,

M.A., M.S. in Medicine, F.A.C.P., Division of Medicine, Mayo Clinic, Associate Professor of Medicine, Mayo Foundation, Graduate School, University of Minnesota; with Associates in the Mayo Clinic and Mayo Foundation. W. B. Saunders Company, Philadelphia, 1946. Price, \$10.

**OPHTHALMOLOGY IN THE WAR YEARS, VOLUME I (1940-1943)**—Edited by Meyer Wiener, M.D., Professor of Clinical Ophthalmology, Washington University School of Medicine; Honorary Consultant in Ophthalmology, Bureau of Medicine and Surgery, United States Navy. The Year Book Publishers, Inc., Chicago. Price, \$13.50.

**RENAL DISEASES**—By E. T. Bell, M.D., Professor of Pathology in the University of Minnesota, Minneapolis, Minnesota. Lea & Febiger, Philadelphia, 1946. Price, \$7.00.

**SEX PROBLEMS OF THE RETURNED VETERAN**—By Howard Kitching, M.D., Foreword by Ernest R. Groves, Professor of Sociology, University of North Carolina. Emerson Books, Inc., New York, 1946. Price, \$1.50.

**SQUINT AND CONVERGENCE**—A Study in Di-Ophthalmology. By N. A. Stutterheim, M.D. (Rand), State Medical Qualification, Holland; formerly Surgeon to the Eye Clinic, University, Leyden; Part-time Ophthalmic Surgeon to the Johannesburg School Clinic, Education Department, Transvaal; with twenty-six graphs and fifteen diagrams of implementations. H. K. Lewis & Co. Ltd., London, 1946. Price, \$3.65.

**A TEXTBOOK OF GYNECOLOGY**—By Arthur Hale Curtis, M.D., Professor and Chairman of the Department of Obstetrics and Gynecology, Northwestern University Medical School; Chief of Gynecological Service, Passavant Memorial Hospital, Chicago. Fifth edition. W. B. Saunders Company, Philadelphia, 1946. Price, \$8.00.

## BOOK REVIEWS

### AMBULATORY PROCTOLOGY

By Alfred J. Cantor, M.D., Associate Proctologist, Kew Gardens Hospital, Long Island, New York; Former Assistant Attending Gastro-enterologist, Queens General Hospital, and Assistant Adjunct Proctologist, Hospital for Joint Diseases, New York. Foreword by BEAUMONT S. CORNELL, M.D., Editor, American Journal of Digestive Diseases. Paul B. Hoeber, Inc., New York, 1946. Price, \$8.

Ambulatory Proctology, a book that consists of thirty-two chapters, five hundred fifteen pages, and two hundred eighty-one illustrations, is a very complete, comprehensive volume, covering all the phases of proctology in an excellent manner. It is detailed in the discussion of operative procedures, covering the most accepted technics for proctologic problems. The author's concept of ambulatory or office procedures is somewhat extreme in regard to surgical patient office care.

It is a book of value for those interested in the field of proctology.

R. H. R.

### IN THE DOCTOR'S OFFICE

The Art of the Medical Assistant

By Esther Jane Parsons, formerly Research Technician, Department of Biochemistry, College of Physicians and Surgeons, Columbia University; formerly instructor

in Medical Office Procedures, Paine Hall School for Medical Assistants, New York City. J. B. Lippincott Company, Philadelphia, 1945. Price, \$2.

This book embodies a wealth of practical information for the nurse who is taking over secretarial as well as nursing duties in a doctor's office. Suggestions for the efficient management of the office, the goal of every doctor's assistant, include making appointments, meeting patients, etc. Likewise, help is given to the girl who has had secretarial but not technical training, attention being given to details of work with which she is unfamiliar such as sterilization of instruments.

Of particular interest are the chapters on "Receiving the Patient and Others," a study in human relationships; "For the Record," the securing and giving of information; and "Little Things Count," the importance of details.

The book's two hundred and eighty-eight pages, in addition to being concisely and well written, make interesting reading because of the author's cleverness of style.

N. E. O.

### MICROBES OF MERIT

By Otto Rahn, Professor of Bacteriology, Cornell University. The Jacques Cattell Press, Lancaster, Pa., 1945. Price, \$4.

Microbes of Merit is the work of one who has had vast experience with useful bacteria, both in Germany and the United States. The book reveals the

author's special familiarity through witticism, clever sketches, and diagrams. Numerous excellent photographs showing industrial plants and methods are included. These, together with the lucidly written text, leave one with the feeling that an authority has spoken.

To the general reader and others who desire to know the role that bacteria play in making sauerkraut, vinegar, beer, wine, alcohol, buttermilk, and cheese the book is recommended. It contains two hundred and seventy-seven pages of easily read print on heavy prewar paper.

A. T. A. G.

#### PERIPHERAL VASCULAR DISEASES

By Edgar V. Allen, B.S., M.A., M.D., M.S. in Medicine, F.A.C.P., Division of Medicine, Mayo Clinic, Associate Professor of Medicine, Mayo Foundation, Graduate School, University of Minnesota; Diplomate of the American Board of Internal Medicine; NELSON W. BARKER, B.A., M.D., M.S. in Medicine, F.A.C.P., Division of Medicine, Mayo Clinic, Associate Professor of Medicine, Mayo Foundation, Graduate School, University of Minnesota; Diplomate of the American Board of Internal Medicine; and EDGAR A. HINES, JR., M.D., B.S., M.A., M.S. in Medicine, F.A.C.P., Division of Medicine, Mayo Clinic, Associate Professor of Medicine, Mayo Foundation, Graduate School, University of Minnesota; with Associates in the Mayo Clinic and Mayo Foundation. W. B. Saunders Company, Philadelphia, Pa., 1946. Price, \$10.

This volume fulfills a longfelt need for a textbook on all peripheral vascular diseases. Compiled by an authoritative group of physicians at the Mayo Foundation, the information herein contained may be accepted without hesitancy. It is proper that the book should be dedicated to George Elgie Brown who was a pioneer physician in this field.

The text is most complete, including definitions of terms used; the anatomy, etiology, physiology, pathology, differential diagnosis, treatment of said diseases; and a generous bibliography of each subject. A valuable and unique contribution has been made with the introduction of historical data on most of the clinical subjects discussed. The inclusion of the surgical treatment of ingrown toenails and corns would superficially appear out of place in this volume, but the authors feel that peripheral vascular disease should include disease of all vessels distal to the heart and to present their experience with a wide range of diseases. This volume will be valuable to all physicians and to all students of medicine.

E. M. G.

#### SQUINT AND CONVERGENCE

A study in di-ophthalmology, by N. A. Stutterheim, M.D. (Rand) State Medical Qualification, Holland; formerly surgeon to

the eye clinic, University, Leyden; Part-time ophthalmic surgeon to the Johannesburg School Clinic, Education Department, Transvaal. H. K. Lewis & Co., Ltd., London, 1946. Price, \$3.65.

The author of this stimulating monograph on convergent strabismus states that there has been a lack of insight into the cause of this greatest of binocular disorders. "Squint," he says, "is a matter not of muscles but of brain," and for that reason he was always reluctant to treat this disorder by the orthodox method of the correction of ametropia and surgical intervention because these were obviously inadequate to deal with a disorder of the brain. Previous to developing his treatment of strabismus he treated eyestrain, or as he calls it, asthenovergence, by kinetic treatment with a battery of prisms. Since each of these disorders are disorders of binocular vision he applied the treatment to both. Experience with early cases confirmed his impression that convergent strabismus was a disorder of the visual brain due to insufficient action of the center for convergence in the midbrain.

The author of this monograph traces the development of convergent strabismus back to the fourth or fifth month of life to the time of the full development of the fovea and the first eye-hand movement. In order that there be no confusion as to the perceived image which the infant seeks to locate with his hand, convergence is necessary to direct the two fovea (bi-fovea) to the same point. If this is not successfully performed, in other words—if the convergence center fails to fully function, foveal vision will persist and develop without waiting for convergence to catch up. This leads to confusion and to over-adduction, the strongest eye movement, which separates the two images. This later becomes purposeful, and the deviation becomes permanent. Thus, this writer states, the squint is "a posture maintained by tonic reflex activity." His definition of squint is "that condition of human vision (the bi-foveal eye) where convergence and its correlate—namely, the bi-fovea—are in abeyance."

As to therapy, the author of this monograph does not believe in the ordinary correction of ametropia and surgery. His therapy consists in first, removal of the cause by connecting up, kinetically, the power of convergence with bi-foveal vision in the squinter, and second, removal of the complications: deviation, uni-ocular neutralization (amblyopia) and pseudo-fovea. The treatment, "begins with the establishment of a range of convergence somewhere in the patient's bi-foveal vision." Once a range of convergence is established, however small, it means the birth or rebirth of the bi-fovea. The monograph describes minutely the technic of this procedure. The author's surgical intervention is limited to lengthening and shortening of Tenon's capsule when this becomes an anatomic impediment. Such procedures are carried out on Tenon's capsule only and do not include the muscles or tendons.—A. H. D.



# SOCIETY PROCEEDINGS

## MEETINGS

### Black Hawk County

The regular meeting of the Black Hawk County Medical Society was held at Black's Tea Room, Waterloo, Sept. 17. Dr. R. M. Sorensen of the Iowa State Department of Health spoke on "Recent Advances in the Treatment of Venereal Disease."

### Butler County

The Butler County Medical Society and its Auxiliary met September 9 in Dumont. Following a dinner at the Dumont Cafe, those present were guests in the home of Dr. and Mrs. C. F. Roder.

### Greene County

The Medical Society and Auxiliary of Greene County held a joint meeting September 12 at the Woman's Club in Jefferson. Following a chicken dinner at 6:30 p.m., Dr. E. M. MacEwen, Dean of the State University of Iowa College of Medicine, spoke.

### Linn County

The Linn County Medical Society met for a 6:30 o'clock dinner at the Montrose Hotel, Cedar Rapids, on September 12. Dr. Lee F. Hill of Des Moines discussed "Common Problems in Pediatric Practice."

### Polk County

Dr. James T. Priestley, Professor of Surgery of the Mayo Foundation, Rochester, Minn., was the featured speaker at the Polk County Medical Society's meeting September 24. His subject was "A Few Basic Considerations of Duodenal Ulcer." The group met at Iowa Lutheran Hospital where they enjoyed a dinner earlier in the evening.

### Poweshiek County

Papers by Dr. John R. Parish and Dr. Clinton E. Harris, both of Grinnell, were presented at a dinner meeting of the Poweshiek County Medical Society at the Monroe Hotel in that city August 13. Dr. Parish's subject was "Pain" and Dr. Harris', "Debunking the Country Doctor."

### Scott County

The first meeting of the Scott County Medical Society for the fall season was held at the Lend-A-Hand Club September 3. Following dinner, Dr. Harry Weinberg of Davenport spoke on "Coronary Occlusion in Young Adults" followed by Dr. James Agnew, also of Davenport, whose subject was "Thyroiditis."

### Woodbury County

The Woodbury County Medical Society met in the ballroom of the Martin Hotel, Sioux City, for a 6:30 o'clock dinner September 19. Dr. W. D. Paul, Associate Professor of Medicine and Chairman of the Section of Physical Medicine, State University of Iowa College of Medicine, spoke on "Poliomyelitis." Dr. James Reeder, Sr. reported on the American Medical Association convention.

## PERSONAL MENTION

Dr. Arthur L. Allison and two sons, Leonard and Billy, of Rodney left August 12 to make their home in Taft, Calif. Dr. Allison, who had practiced for forty-three years, came to Rodney July 31, 1906, having practiced two years in Nebraska and one year at Blencoe, Iowa, previous to that time.

Dr. Frank N. Bay of Albia has received a bronze medal in recognition of his services aboard the United States hospital ship Sanctuary and in the naval hospital at Shoemaker, Calif. Dr. Bay's outstanding service was in the field of orthopedic surgery at the 4,300-bed hospital in Shoemaker where he specialized in reconstruction of shattered elbow joints and tubercular bone treatment. Discharged in June, he has resumed practice in Albia and Monroe County.

Dr. John W. Berg has accepted the position of assistant to Dr. Russell R. Hanson of the Porath Hospital in Storm Lake. He received his discharge from the navy in which he served two years as lieutenant (j.g.) on July 15. Dr. Berg, who was graduated from the State University of Iowa College of Medicine in 1944, served his internship at Jackson Memorial Hospital, Miami, Fla.

Dr. Frederick Brush who has been a physician at the Oakdale Sanitarium, became a resident physician in surgery at the University of Iowa Hospital September 1. He is a graduate of the State University of Iowa College of Medicine and a veteran of the United States Army Medical Corps.

Dr. Jack M. Campbell who recently returned to Sheldon after receiving his release from military service is associated temporarily with Dr. K. W. Myers of that city. Dr. Campbell expects to take advanced work in surgery at a later date.

Dr. Patrick M. Cmeyla of Sioux City has been notified by the War Department that he is to receive the Legion of Merit award for his activities

while a prisoner of war in Taira, Japan. Dr. Cmeyla returned to this country in October, 1945, and was released from service in July, 1946.

**Dr. James H. Coddington** and **Dr. Arthur E. Jensen**, both of Humboldt, have announced their association in the practice of medicine and surgery, effective September 1 with offices in the Coddington Building. Dr. Jensen has practiced in Humboldt County since 1931. Dr. Coddington recently reestablished his practice in Humboldt after serving four years as Flight Surgeon with the Army Air Forces.

**Dr. Robert Collison** of Carroll recently left to serve as resident physician in Mercy Hospital, Cedar Rapids, for one year. He served as regimental surgeon, Sixth Marines, for two years before his release from active duty.

**Dr. R. Sanford Cook** opened offices for the general practice of medicine in Tipton September 6. Dr. Cook was graduated from the State University of Iowa College of Medicine in 1942, interning at St. Luke's Hospital, Duluth, Minn. Following two years' military service, he took a postgraduate refresher course at the University of Michigan.

**Dr. Morton R. Crew** opened offices for practice in Clearfield August 26. Dr. Crew was graduated from the State University of Iowa College of Medicine following which he served his internship in Johnstown, Pa. He was recently released from active duty in the navy.

**Dr. Glen W. Doolen**, Davenport physician and medical director of Pine Knoll sanitarium, has accepted a position with the Veterans Administration as senior surgical consultant for tuberculosis for the states of Colorado, Utah, and Wyoming. In addition, he will teach four hours per week at the University of Colorado medical school under the Veterans Administration residency program. Dr. Doolen, who had practiced in Davenport twenty-three years, specialized in diseases of the chest. His practice has been taken over by Dr. Harold J. Evans, recently discharged from the army medical corps with the rank of major.

**Dr. Carl Dwankowski**, formerly of Mount Pleasant, was recently discharged from the army and is temporarily associated with Norwalk State Hospital, Norwalk, Calif.

**Col. Lester M. Dyke** has purchased a half interest in the medical practice of Dr. Gerrit Maris of Hull, Iowa. Col. Dyke recently returned from Washington, D. C., where he was a member of the staff of the Surgical Service of Walter Reed Hospital. At one time he was commanding officer at Schick General Hospital, Clinton, Iowa.

**Dr. Alvin E. Evers** of Pella opened his office for

the general practice of medicine in Emmetsburg September 1. After his discharge from the Army Medical Corps, Dr. Evers did three months' internship at Mercy Hospital, Des Moines, and completed a six-month residency for advanced training at Iowa Lutheran Hospital in Des Moines.

**Dr. Donald M. Harris** resigned August 24 as Sioux City health director and state medical director for five northwest counties to accept a position of director of the Chippewa County health unit at Sault St. Marie, Mich. Dr. Harris went to Sioux City in 1943, following which he served in the Army Medical Corps before returning to his job in March, 1946.

**Dr. Lewis E. Hedgecock** of Hampton has accepted a permanent appointment in the regular Navy Medical Corps. He is stationed in North Carolina at the present time.

**Dr. George W. Hogshead** has been added to the staff of the Iowa State College Hospital. A native of West Virginia, he was recently discharged from the navy.

**Dr. Glenn J. Hruska** of Cedar Rapids joined the staff of Steele Memorial Hospital in Belmond September 1. Dr. Hruska, a Captain in the Army Medical Corps, served with the 104th Timberwolf Division in the European Theater, earning the Bronze Star and the Combat Medic badge.

**Dr. Charles W. Ihle, Jr.**, who has been practicing in Cherokee since February, left recently for Sioux Falls, S. Dak., where he will specialize in infants' and children's diseases. Before entering service, he practiced with his father at Cleghorn.

**Dr. Philip C. Jeans**, Professor of Pediatrics in the University of Iowa College of Medicine, has been named advisory editor of "American Practitioner," a new monthly medical journal.

**Dr. John G. Lavender**, recently discharged from the Army Medical Corps in which he held the rank of Captain, has opened a practice in Silver City. He is a graduate of the University of Nebraska.

**Dr. Jeremiah F. Lawlor**, recently released from the Navy Medical Corps, has announced that he will locate in Cherokee permanently. He has been assisting Dr. J. H. Wise of that city in his practice since July.

**Dr. E. R. Leonard**, formerly of Pender, Neb., has opened offices for the general practice of medicine in Marcus.

**Dr. Arthur L. McGilvra**, who has been assisting Dr. William Maris of Sioux Center during a recent illness, has purchased a half interest in Dr. Maris'



practice. Dr. McGilvra has just been discharged from the Army Air Forces.

Dr. Alexander C. McKean has resigned from his position of Assistant Physician at Fergus Falls State Hospital, Fergus Falls, Minn., and is spending the winter in Brownsville, Tex.

Dr. Robert McNamara has become an associate at the McCrary-Rost Hospital in Lake City. A graduate of Creighton University, Omaha, he served three years as Lieutenant in the Navy Medical Corps. For the past three months he has been on the staff in a veterans hospital in San Francisco, Calif.

Dr. Donald Maland has become associated with Dr. William A. Bockoven of Cresco. Dr. Maland is a graduate of the University of Iowa and was recently discharged from service.

Dr. Clarence J. Mikelson of Iowa City is now associated with Dr. Clark N. Cooper of Waterloo after having completed four years and nine months in the surgical residency at the University Hospitals. Iowa City. His practice is limited to general surgery.

Dr. John F. Moriarity of Omaha, a veteran of the Army Medical Corps, has opened offices in Atlantic. Dr. Moriarity has been doing graduate surgery work at Cook County Hospital, Chicago. the last six months.

Dr. James S. Newton, a native of Sigourney, has taken over the practice of Dr. William L. Alcorn in Washington until the latter regains his health. Dr. Newton was recently discharged from the Army Medical Corps.

Dr. Carl D. Oelrich of Sioux Center resumed practice in that city on September 5 after being discharged from the Army Medical Corps in August. He practiced there nine years before entering service in 1943.

Dr. J. Carl Painter of Dubuque was re-elected Governor of the American College of Chest Physicians for the State of Iowa at the group's annual meeting in San Francisco June 27 to 30.

Dr. Robert D. Paul is now associated with his father, Dr. John D. Paul, in the general practice of medicine and surgery in Anamosa. Dr. Paul, who recently completed a refresher course at the University of Iowa College of Medicine, was released from service July 1. He held the rank of Major at the time of his discharge, having served three years.

Dr. George H. Powers, a veteran of three years' naval service, is the new partner of Dr. Harold

McK. Bunch of Shenandoah. The two physicians served together in San Diego, Calif., as naval medical officers during the war. Dr. Powers is a graduate of the University of Kansas Medical College.

Dr. G. L. Richey has been added to the medical firm of Drs. Leffert, Brummitts, and Edwards in Centerville. Dr. Richey served as flight surgeon holding the rank of Lieutenant Colonel, during the war.

Dr. Leonard P. Ristine, upon his return from service, has resumed his duties as superintendent of the Mt. Pleasant Hospital for the Insane, according to recent announcement by the State Board of Control. Dr. Adolph Soucek, acting superintendent, returned to his original position of assistant superintendent at the Cherokee Mental Hospital.

Dr. Joseph H. Rock has entered into partnership with Merrill M. Benfer of Davenport. For the past twenty years he has been chief of the genito-urinary service at the Veterans Administration, Los Angeles, Calif., and will continue in that line of surgery in Davenport. Dr. Rock served in the Army Medical Corps during the war, receiving his discharge in December, 1945.

Dr. R. W. Robb of Oswatomie, Kansas, has joined the staff of the Independence State Hospital. He had been on the staff at the state hospital in Oswatomie since 1929.

Dr. Richard Schoonover, a specialist in genito-urinary disease, has joined the staff of the Gilfillan Clinic in Bloomfield. He is a graduate of the Bellevue Hospital Medical College of New York City and received his specialized training in the Roosevelt Hospital in that city.

Dr. Eugene Wagner, formerly of Moline, Ill., is now associated with Dr. Werner P. Pelz of Nashua in the practice of medicine and surgery. Dr. Wagner was discharged from the army last summer holding the rank of Major at that time.

The Spirit Lake Clinic, a new five-physician clinic, will be opened October 1 in that city, according to announcement by the organizers. Drs. T. L. Ward, Donald F. Rodawig, Ruth F. Wolcott, Phil Scott, and F. L. Roberts are the participating physicians. Offices will be located in the former nurses' home across the street from the hospital. Joint ownership and management of the Marcus Snyder Memorial Hospital in Spirit Lake was announced at the same time.

Three instructors from the State University of Iowa School of Medicine appeared on the program at the session of the Twenty-fourth American Congress of Physical Medicine in New York September

4 to 7. They were Dr. Harry M. Hines, head of the Department of Physiology, Dr. Wm. D. Paul, Director of the Department of Physical Medicine, and Leopold Rovner of the Physics Department.

### MARRIAGE ANNOUNCEMENTS

Miss Marie D. Richter, daughter of Mr. and Mrs. Herbert E. Richter of Staples, Minn., and Dr. Harold Hensdorf, son of Mr. and Mrs. Robert Hensdorf of Farragut, were united in marriage August 8 at the First Presbyterian Church in Kansas City, Kan. Dr. Hensdorf, who was discharged from the Army Medical Corps in June, recently opened offices with Dr. Robert Powell in Farragut and Shenandoah. The couple are at home in Farragut.

The marriage of Miss Lorene Lindaman, daughter of Mr. and Mrs. Martin Lindaman of Aplington, and Dr. Edward L. Rohlf, Jr., son of Mrs. Edward L. Rohlf, Sr., of Waterloo, was solemnized August 17 in the Calvary Baptist Church, Waterloo. Mrs. Rohlf served in the Army Nurse Corps and Dr. Rohlf with the Army Medical Corps during the war. He is now associated with Drs. J. R. Thompson and H. F. R. Plass in Waterloo where the couple reside.

Miss Florence Fillenwarth, daughter of Dr. and Mrs. Floyd Fillenwarth of Charles City, became the bride of Dr. Frederick C. Brush, son of the late Dr. and Mrs. Milo O. Brush of Shenandoah, August 30. The double ring ceremony was performed by the Rev. F. L. Hanscomb at the Little Brown Church in the Vale, Nashua. Mrs. Brush is a graduate of the School of Nursing and Dr. Brush of the College of Medicine of the State University of Iowa. Dr. Brush is an assistant resident in the surgical department, University Hospitals, Iowa City.

### DEATH NOTICES

Gaumer, James Stewart, of Fairfield, aged seventy-four, died September 10 at his home following an extended illness. He was graduated from the Rush Medical College in Illinois in 1900. At the time of his death he was a member of the Jefferson County and Iowa State Medical Societies.

Stabo, Trond Neilson, of Decorah, aged seventy-six, died August 20 of a heart attack at his summer home in Hayward, Wis. He was graduated from the Royal Fredrik University, Oslo, Norway, in 1894, and at the time of his death was a life member of the Winneshiek County and Iowa State Medical Societies.

Samuelson, Carl August, aged fifty-three, of Sheldon, died September 15 in Mercy Hospital, Sioux City, of a heart ailment. He had been ill about one month. Dr. Samuelson was a graduate of the State University of Iowa College of Medicine, Iowa

City, with the class of 1923 and was a member of the O'Brien County and Iowa State Medical Societies at the time of his death.

### QUARTERLY REVIEW OF OBSTETRICS AND GYNECOLOGY

During the past two years there has been an increasing demand for Volume 1, 1943; Volume 2, 1944; and Volume 3, 1945 of the Quarterly Review of Obstetrics and Gynecology. In an effort to cooperate with those who desire complete volumes, the Washington Institute of Medicine is having reprinted one thousand sets in permanent bound volumes. They are available at the original price of twenty-five dollars per set.

The three volumes contain 2,193 pages, presenting 3,663 abstracts of obstetrical and gynecological papers of importance and representing the work of more than 2,000 clinicians, research workers, teachers and bibliographers. Those desiring complete volumes should communicate with the Washington Institute of Medicine, 1720 M Street, N. W., Washington 6, D. C.

### OMAHA MID-WEST CLINICAL SOCIETY MEETING

The Omaha Mid-West Clinical Society will hold its Fourteenth Annual Assembly October 28 to November 1 inclusive at Hotel Paxton in Omaha. The program will include motion pictures, scientific and technical exhibits, clinics, and question and answer periods following luncheons and dinners. There will also be seven panel discussions on timely subjects.

Guest speakers include Ralph K. Ghormley, M.D., Rochester, Minn.; Reuben G. Gustavson, Ph.D., Lincoln, Neb.; Kenneth D. A. Allen, M.D., Denver, Colo.; Dallas B. Phemister, M.D., Chicago, Ill.; Perrin H. Long, M.D., Baltimore, Md.; Curtice Rosser, M.D., Dallas, Tex.; Constantine F. Kemper, M.D., Denver, Colo.; Joe V. Meigs, M.D., Boston, Mass.; Francis J. Braceland, M.D., Rochester, Minn.; Robert A. Cooke, M.D., New York, N. Y.; Henry E. Michelson, M.D., Minneapolis, Minn.; Henry H. Turner, M.D., Oklahoma City, Okla.; Willard O. Thompson, M.D., Chicago, Ill.; Samuel J. Kopetzky, M.D., New York, N. Y.; George F. Lull, M.D., Chicago, Ill.; and Arnold L. Gesell, M.D., New Haven, Conn.

Some of the subjects to be discussed are "Shock," "Endometriosis," "Asthma and Migraine," "Psychosomatic Medicine," "A New Uterine Packing," "Practical Aspects of Allergy," "The Therapy of Allergic States," "Lesions of the Right Colon," "Technic of Total Hysterectomy," "Streptomycin, Its Uses and Abuses," "Common Affections of the Optic Nerve," "The Fenestration Operation for Deafness," "Management of Cervico-Vaginal Disorders," "The Modern Treatment of Otitic Infections," "Nasal Physiology in Dietary Insufficiency," and "The Wish to Fall Ill."



# The JOURNAL *of the* Iowa State Medical Society

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## WAR WOUNDS OF THE ABDOMEN\*

H. H. Searls, M.D., and F. P. Shidler, M.D.,  
San Francisco

In World War II, of all casualties treated by the Medical Corps of the United States Army totaling 372,000, 5.2 per cent were abdominally wounded.<sup>1</sup> Statistics are not as yet available from the United States Navy, but abdominally wounded Navy personnel were not returned from the Pacific Theater to naval hospitals on this continent in any considerable numbers prior to 1944. In the first two years of the war such patients were rarely encountered in the wards of the naval hospitals on the mainland. In these earlier years men shot in the head, neck, chest and abdomen did not survive, and therefore war surgery was limited to treatment of the extremities. In 1944 and 1945, however, increasing numbers of abdominally wounded were brought back to the mainland, and in each of the naval hospitals on the West Coast one could find several wards filled with them.

These observations would indicate that throughout the war there was a definite and progressive improvement in the immediate care of Navy and Marine Corps personnel thus injured. Several factors joined to produce this improvement. The greatly increased availability of whole blood as a result of air transportation played an important part. Shipments of whole blood from the United States donor centers, which started in August, 1944, to the European Theater and in November, 1944, to the Pacific Theater, were assigned a number one priority for transportation by air. Refrigeration was by dry or water ice. Insulation was maintained by the use of plastic foam containers designed in the Naval Research Institute. Approximately 178,000 pints of whole blood were received at Guam and distributed to the Philippines, Iwo Jima, Okinawa, and to the hospital

ships and other fleet units.<sup>2</sup> In the twelve months ending in May, 1945, the Army used 385,000 pints of blood in the European Theater of Operations, half of which was flown directly from the United States.<sup>1</sup>

Another factor of equal importance was the planning of the Bureau of Medicine and Surgery in cooperation with the surgical staffs of the Commander-in-Chief, Pacific, and of the Fleet Marine Force, Pacific. Recognizing the sinister influence of delay on the mortality rate, they constantly directed their efforts toward shortening the time interval between wounding and surgery. Such planning culminated in the placing of light-proof operating rooms, completely equipped with electricity, running water, laundry, sterilizers, suction, and adequate surgical furniture and instruments directly behind the line of combat. Young and vigorous, but properly trained surgeons headed an adequate personnel to man these stations. As a result of such facilities, men on Okinawa often were operated upon within thirty minutes after injury. Thus, the early arrest of hemorrhage and the prevention of soiling and peritonitis must have had a wholesome effect on the survival rate of the abdominally wounded. This planning also placed properly equipped and manned operating rooms aboard hospital ships, attack transports, and specially prepared LST's in the immediate vicinity of the invasion coasts. On these ships operation commonly was performed within six hours of injury.

Improvement in methods of transportation probably also influenced mortality rates of the more seriously wounded. Early in the war these patients were usually transferred from one ship or station to another five or six times over a period of many weeks before eventually reaching a naval hospital on the mainland. On such a protracted journey efficiency of treatment was reduced by the repeated change of attendant medical personnel. As a result, wounded from the Solomons campaign, Bougainville, and the

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Presented before the Ninety-fifth Annual Session, Iowa State Medical Society, Des Moines, April 18 and 19, 1946.

Coral Sea arrived at West Coast hospitals exhausted and depleted, often with badly infected wounds. Their general condition was so poor that minor surgical procedures frequently caused severe shock. As increasing numbers of hospital ships and attack transports appeared in the Pacific, transportation rapidly improved. Having been sent to such a ship immediately after wounding, the patient remained under the supervision of a single surgical group until he was transferred to a base or mainland hospital for definitive care.

Toward the end of the war a further great forward step in transportation planning brought the wounded from the battlefields to these hospitals by air in a few days or even hours. Large numbers of planes from the Air Transport Command and Naval Air Transport Service carrying specially trained medical and nursing attendants were assigned to the task of transporting the wounded. Airborne casualties stood the trip well. Their generally excellent condition contrasted sharply with that of patients received early in the war.

### Immediate Diagnosis and Treatment

Wounded men die in the first two hours of hemorrhage; in the first two days, of shock.<sup>3</sup> Abdominal hemorrhage cannot be checked by pressure or tourniquet; therefore, once shock has been controlled or it becomes evident that bleeding is so severe as to prevent such control, laparotomy is imperative. Transfusion of large amounts of blood, at times into several veins simultaneously, is the most important procedure in shock therapy. Blood volume studies of seriously wounded men with systolic blood pressure of 85 or less indicated an average loss of at least one third of their blood volume.<sup>1</sup>

First aid for all wounded included administration of morphine, and therefore men with abdominal wounds, on arriving at the field operating station or aboard a ship stationed off shore during an invasion, complained little of pain. Because of the nature of their injuries such patients were given priority for immediate operation by the classifying officer. During the course of treatment for shock and preparation for operation an attempt was made to diagnose the internal injuries incurred. Knowledge of the position of the patient at the time of injury was helpful in tracing the pathway of the missile through the body.

Physical examination remained the most important and reliable method of determining the presence and extent of intra-abdominal trauma. On inspection the location of wounds of entry and exit was informative. Wounds of the buttocks

carried the threat of abdominal penetration. On palpation the two cardinal signs of intra-abdominal injury were acute abdominal tenderness and marked rigidity of the anterior wall of the abdomen. Blood vomited or aspirated through the gastric tube suggested perforation of the upper gastro-intestinal tract. Blood noted on rectal examination indicated injury of the colon or rectum. On abdominal auscultation, the absence of peristaltic sounds strongly suggested visceral perforation and peritonitis.<sup>4</sup>

Opinions as to the value of x-ray as a diagnostic aid in the recognition of intraperitoneal injury varied considerably. In some organizations it was used routinely. However, its use delayed operative treatment, required harmful shifting of the patient, and too seldom furnished additional information. Usually there was an urgent con-

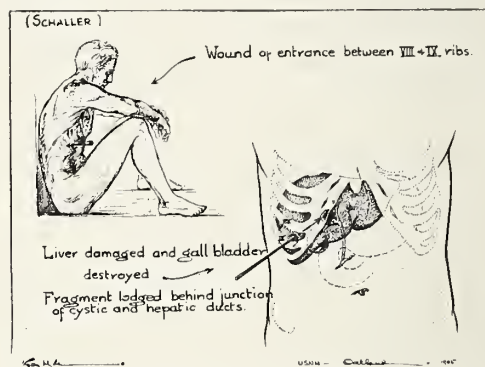


Fig. 1. Shrapnel destroyed the gallbladder of this patient Feb. 18, 1945. Twenty-eight thousand cubic centimeters of bile were removed by multiple paracentesis. On April 6 a slug was removed from the hilus of the liver and a tube placed in the open bile duct (cystic). Drainage stopped spontaneously June 17, multiple abscesses drained, and the patient recovered.

current demand for its aid in the immediate diagnosis of thoracic and skeletal injuries. Nevertheless, location by x-ray of the foreign body in wounds of the trunk or buttocks without wounds of exit was necessary to determine its course and, thereby, the structures injured.

Few trained anesthetists were available. Open drop ether proved safe and effective in the hands of the casual administrator and was probably the anesthetic most used in operating for uncomplicated abdominal wounds.<sup>5</sup> Sodium pentothal, either alone or as an adjuvant to ether, was popular in the Navy and Marine Corps front line operating rooms.<sup>6</sup> Spinal anesthesia was generally considered dangerous and was contraindicated in the presence of an already lowered blood pressure. Continuous gastric drainage established before operation by transnasal indwelling tube was deemed advisable.<sup>3</sup>

The patient exhibiting clinical evidence of intra-



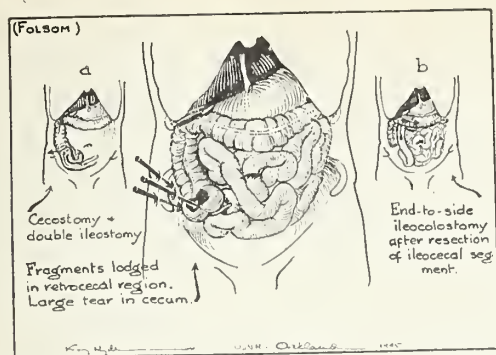


Fig. 2. The patient, injured June 11, had shrapnel in the left upper quadrant. At immediate operation three feet of terminal ileum were resected and cecostomy and ileostomy were performed. On August 31 the terminal ileum and one-half of the ascending colon were resected followed by an ileotransverse colostomy.

abdominal injury first required debridement of his wounds of entry and exit. This was accomplished by wound excision, taking little skin, all damaged muscle and any loose fragments of bone. Injured peritoneum was closed and the wounds packed loosely with vaseline gauze. Laparotomy was then performed, a right or left rectus incision providing quick and adequate exposure. At operation the amount of hemorrhage usually was striking, the peritoneum being distended with blood. Removal of the blood by suction was necessary to permit inspection of sources of bleeding. Bleeding vessels were isolated and ligated. Packing occasionally was required if the bleeding point could not be demonstrated. Following arrest of hemorrhage, a careful, systematic examination of the gastrointestinal tract was carried out and injuries were repaired as encountered, it being kept in mind that in a hollow viscus these perforations were paired unless tangential.

Perforations of the stomach and small bowel were closed by inverting sutures of catgut, silk, or cotton. Multiple lacerations in a loop of the small bowel or loss of its blood supply occasionally required resection and anastomosis or obstructive resection and enterostomy. When the colon was injured, exteriorization of the bowel at the site of the injury was effected, or (if the immobile portions were involved) repair was followed by proximal colostomy. With colon perforation there was a very high incidence of general peritonitis, and the prognosis rapidly became more grave with delay in operation. Wounds of the rectum were characterized by inaccessibility, difficulty of diagnosis, and the hazard of pelvic and ascending retroperitoneal cellulitis. Sigmoid colostomy was mandatory as was also free posterior drainage, best established by coccygectomy and incision of the fascia propria, exposing the rectal, sacral and lateral paramedian spaces. When the laceration

of the rectal wall could be closed, convalescence was shortened materially.<sup>9</sup>

Lacerations of the gallbladder were repaired, or the viscus was removed or drained by tube through a stab wound. Repair of the common duct was accompanied by its drainage by tube. Wounds of the urinary bladder were closed by suture in conjunction with suprapubic cystostomy. Lacerated ureters were drained exteriorly. Trauma to the spleen was treated by splenectomy. Hemorrhage from liver wounds was controlled by suture or pack. Severe bleeding from the kidney or its pedicle required transperitoneal nephrectomy. Foreign bodies were removed only if encountered on exploration. In the immediate treatment of the abdominally wounded, mortality rates ranged from 30 to 40 per cent.<sup>7</sup>

Combined thoraco-abdominal wounds required specialized treatment including intratracheal anesthesia, decompression of hemothorax by tube drainage "under water," and either abdominal or transthoracic approach to the injured viscera and diaphragm.<sup>8</sup> As would be expected, their surgical treatment was associated with a mortality rate above 40 per cent.

#### Late Diagnosis and Treatment

By immediate laparotomy and the procedures just described, the combat surgeon saved the lives of many abdominally wounded. When these patients arrived at hospitals in the rear and on the mainland, it became the problem of their new

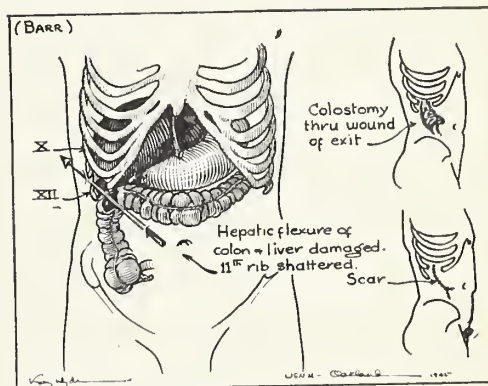


Fig. 3. Ribs of the patient, injured June 9, 1945, were removed in debridement, and the colon was exteriorized through the wound of exit. On August 28 the colostomy was freed from the ribs and closed, healing per primam.

surgical attendants to restore for them as completely as possible normal function in the various systems mutilated at the time of injury. General measures to combat depletion having been instituted on entry, a careful study was made of each patient. His health record frequently was not informative, for the surgeon who first treated him

had little time to record the description of his injury and treatment. Occasionally the patient's story was of value, but for the most part the diagnosis of injury and complications was based on the objective findings gained from careful physical examination and supplemented by laboratory procedures as indicated.

Physical examination included inspection of the patient as a whole with evaluation of his general condition and investigation of the main and collateral injuries and their complications. Abdominal examination included search by palpation for abscesses and herniae, digital examination of all bowel openings, and digital and proctoscopic examination of the rectum. Fistulae were explored by probe and catheter and the character of drainage noted. Gastro-intestinal x-ray studies were made as soon as the patient's condition would permit. If an ileostomy or colostomy was present, fluoroscopic and stereoscopic visualization of the involved loop was required. Fistulous tracts similarly were outlined with lipiodol. Cystograms, cholecystograms and pyelograms were made if indicated. Foreign bodies were localized. X-ray search for osteomyelitis or fracture in the pelvic and other bones in close proximity to wounds was carried out. Fluoroscopy established or excluded subphrenic abscess.

In addition to routine blood and urine examinations, plasma protein and plasma chloride levels were determined and checked repeatedly in the patient with ileostomy or small bowel fistula. Such patients, because of the severity of their wounds and complications, loss of fluids and food through enterostomies and fistulae, exhaustion from travel, and depletion from pain and infection, required special nursing and medical management. Multiple blood transfusions and intravenous infusions were administered on arrival. Daily forced feedings by means of the transnasal indwelling gastric tube of a formula including 200 grams of protein and a twice-normal vitamin requirement and totaling 4500 calories were of great benefit.

Constant search was maintained for secondary infections and abscesses about fistulae and enterostomies. These were drained as encountered.

Usually major surgical procedures were postponed until these preoperative measures had resulted in a sufficient restoration of weight, strength and the chemical components of the blood to establish the patient's preparedness for operation. Occasionally the patient with an enterostomy in a proximally situated loop failed to respond to forced feeding and other measures until, in desperation, his stoma was closed. Improvement thereafter nearly always was rapid.

Closure of an enterostomy was the operation most commonly required by these patients. For ten days before operation the bowel was prepared by daily enemata of normal saline solution. A non-residue diet was prescribed. A heavy dosage of succinylsulfathiazole was administered during this period. Penicillin was given systemically before and for two weeks after operation. These measures effectively removed the hazard of peritonitis.

Closure of enterostomies by crushing of the spur and extraperitoneal anastomosis occasionally was performed, but mobilization and excision of the stoma with end-to-end intraperitoneal anastomosis proved much more satisfactory. Excision

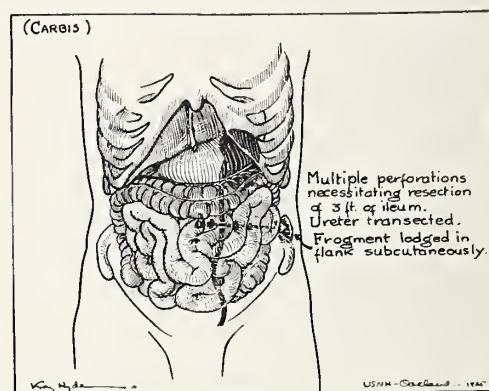


Fig. 4. Shrapnel was removed from this patient (wounded March 7) on April 14. The ileostomy wound was closed on June 30 followed by a left nephrectomy on September 13 because of the divided ureter. The patient recovered.

of all scar tissue attached to the mucosa and sufficient mobilization of the bowel to permit anastomosis without tension were considered mandatory. An inverting running mucosal suture of fine catgut was reinforced by seromuscular interrupted mattress sutures of fine cotton. Crystalline sulfanilamide was frosted in the wound, and it was closed in layers. Cotton was the suture material of choice. Routine postoperative measures, as employed in all gastro-intestinal procedures, included transnasal gastric suction.

Foreign bodies, if found to be the source of persistent sinuses or recurrent abscesses, required localization and removal.

Enteric fistulae were traced at operation to the point of origin and the hole in the bowel wall closed by multiple purse-string or mattress sutures. Sulfanilamide was dusted in the wound and it was closed in layers. Ureteral fistulae required nephrectomy. Biliary fistulae usually were corrected only by difficult plastic repair. Only one was encountered in our series. Its point of origin must have been the gallbladder or cystic duct, as the



flow of bile stopped spontaneously without development of jaundice about six weeks after injury.

Occasionally herniae developed at the site of previous wounds or incisions. They were amenable to the usual procedures employed in the treatment of this condition in civilian practice.

In the group of patients with abdominal wounds treated at the United States Naval Hospital, Oakland, during the eleven months ending Mar. 1, 1946, there were no operative deaths.

This brief account has portrayed for you some of the problems faced by the war surgeon who treated the abdominally injured. Whether in the field operating room or the mainland hospital, their solution involved the basic principles of surgical diagnosis and treatment expressed in the teaching and practice of modern surgery.

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## GELSEMIUM IN THE PREPARALYTIC STAGE OF POLIOMYELITIS

Henry D. Holman, M.D., Mason City

Although anterior poliomyelitis has negligible mortality rates, its morbid effects upon the nervous system causing paralysis, muscle wasting, and contractions are sufficiently distressing to make it one of the most dreaded diseases. When fatality does occur, it is generally the result of bulbar paralysis. Thus, the untoward effects of the infection are directly or indirectly a function of its neuronotropic activity. In fact, its systemic manifestations by themselves are relatively mild and harmless.

Extensive efforts have been made to prevent paralysis by control of infection, but to date results in humans with both passive and active immunity have been disappointing. Similarly, it remains to be shown that the virus is susceptible *in vivo* to any of the new antibiotic agents. Failing the infection itself, interest has been directed more

recently to the possibility of interrupting the neuronotropic cycle. This approach naturally presupposes an effective treatment during the preparalytic stage of the disease.

In 1940, Sister Kenny<sup>1, 2, 3</sup> pointed out that the early muscular spasms of the preparalytic period contribute in some obscure but definite manner to development of paralysis. She treated them with moist heat with considerable apparent effect. Many workers became interested in her theories and methods, but some have been dissatisfied with their own results using them. More recently certain antispasmodic drugs, curare<sup>4</sup> and prostigmine, have been tried and have shown promise, the scope of which has yet to be finally assessed. Since I have had experience using gelsemium for the same purpose during two epidemics in Cerro Gordo County, Iowa, in 1910 and 1945, and since this nearly forgotten drug has certain advantages in our opinion, I have been encouraged to report our results.

### Pharmacology of Gelsemium

Gelsemium, the root of yellow jasmine, contains several active alkaloids. The best descriptions of its pharmacology are found in older texts<sup>5, 6</sup> since it was formerly popular as a nervous depressant. It is omitted entirely from mention in some recent books on pharmacology and therapeutics.

The exact mode of action has not been worked out. It is known to depress the tone and contractions of excised intestine. Clinically in humans, it produces evidences of generalized depression. Muscles tend to relax and both voluntary and involuntary contractions decrease. Respiration is slowed and pupils dilate.

The drug is markedly toxic and the margin between therapeutic and toxic dose is narrow. Even small doses are said sometimes to cause toxic symptoms. The warning signs are double vision, ptosis, widely dilated pupils, weakness and depression. The drug is not notably cumulative and seems to be eliminated very readily in children. Signs of toxic effects are no contraindication to its continued use providing that time is allowed for elimination to a safe level.

Gelsemium is available for use in the form of the fluid extract and the tincture. The tincture is generally preferred because of the ease of dispensing. Since preparations deteriorate rapidly, constant care must be exercised to be supplied with a fresh and pharmaceutically potent drug from a reliable source.

### Treatment Regime

Gelsemium, like all antispasmodic therapy in poliomyelitis, must be started early in the disease.

Early diagnosis before the onset of paralysis can be made with reasonable certainty during an epidemic, especially with known contacts having been made. The disease usually attacks children and young adults and presents an acute onset typical of a moderate systemic infection. There is malaise, moderate fever of three to four days' duration, occipital headache, pain down the back of the neck, restlessness, rapid irregular respirations, tachycardia, and constipation. Meningismus and peripheral muscle spasms occur early in approximately three-fourths of the cases. Typical spinal fluid findings, if present, may be helpful. It is estimated that some 10 per cent of cases fail to develop changes; they are transitory in others, and a routine spinal tap is unnecessary in a typical syndrome during an epidemic. On the other hand, it may be very useful in diagnosis of sporadically occurring cases.

Differential diagnosis from acute bacterial and viral respiratory infections is sometimes difficult. Pulse and respiratory rates have been found the most reliable signs; both tend to be considerably more rapid in poliomyelitis, and both have a high ratio in relation to the degree of fever with noteworthy irregularities in rate and depth of respiration as well as character of the pulse wave. The respiratory disturbances of poliomyelitis tend to yield within a few hours to gelsemium therapy—much more readily than observed in other infections where there is little or no effect from equivalent doses.

When poliomyelitis is suspected, the patient should be kept as quiet as possible and isolated with especial precautions to stool disposal. There is an unfortunate tendency, especially in rural communities, to transport early cases to medical centers, sometimes long distances at considerable discomfort. Since there is no specific therapy in hospitals which is not available in the average home, and there are few communities so isolated that a respirator cannot be obtained in time for the rare emergency, we customarily recommend home nursing. The quality of nursing care is most important if mental and physical relaxation are to be obtained. So is warmth, and the Kenny method was used in only part of the cases (1945 group) reported.

Gelsemium is commenced as soon as the disease is suspected. The adult dose is 5 minims, and in a child of one year the dose would be  $\frac{1}{2}$  to 1 minim. It is administered every two hours day and night in doses of sufficient size to hold a high level of therapeutic effectiveness continuously until all danger of paralysis is passed. The duration of this period is a matter for clinical judgment

based on what is known of the usual course of the disease. We continue full dosage until defervescence then gradually decrease it, constantly watching for recrudescence of the disease process. We rarely discontinue it altogether for at least twelve to fourteen days and resume full medication without hesitation any time it seems indicated.

The dosage may be regulated by watching the respiration; when the optimum therapeutic level is reached, the respiratory rate falls to normal or slightly above and irregularities disappear. The pulse is affected less constantly. Pupils dilate to approximately the midposition or slightly more, restlessness decreases, patients relax and frequently fall into a restful sleep. Thereafter, exceeding care must be taken to establish an individual maintenance dose. The zone between toxic and therapeutic levels is narrow. Relatively small doses given as frequently as every two hours help balance intake and excretion. Dilating pupils, a falling respiratory rate, and excessive general depression are warning signs of toxicity. An experienced attendant should see the patient at frequent intervals. Lacking such assistants, I have managed cases successfully by seeing the patient personally at intervals of eight to twelve hours. Longer than twelve hours is dangerous and less is preferable. If toxic symptoms appear, one to two doses may be omitted, and medication may be resumed thereafter with a slightly smaller amount. We have observed no serious toxic effects.

More recently phenobarbital in small divided doses has been added to gelsemium. It should be used with great care since it may mask the effects of gelsemium. It is, however, in no sense interchangeable with it as was shown in one of our patients who was taking it along with what eventually proved to be an inert tincture of gelsemium. The symptoms and signs of the infection increased progressively until the error was recognized and a potent tincture substituted.

Liberal amounts of ascorbic acid were given in 1945. As an adjuvant hot moist packs were used in some of the cases treated in 1945. When packs were used, they were applied according to the Kenny technic—four treatments daily, each two hours in length and spaced at equal intervals during the twenty-four hours, and given only during the febrile stage of the illness.

### Case Reports

The following case reports have been selected to illustrate treatment and results:

CASE I—H. E., a farmer 42 years of age, came into the office on Oct. 15, 1945, at 10 a. m. com-



plaining of pain in the head and neck of a few hours' duration. He had been treated a month earlier for what he interpreted as similar pains in the neck and shoulder.

His expression was somewhat anxious, temperature, 99.1 F., pulse rate 90 per minute, and respirations 26 per minute. Physical examination was otherwise normal. Because of the current epidemic in the community, early poliomyelitis was suspected and the patient directed to return home and go to bed immediately. Tincture of gelsemium, 4 minims every two hours, was prescribed.

The following morning at 10 a.m., contrary to orders, he presented himself again at the office. The temperature was 101 F., pulse rate 130 per minute, and respirations 24 per minute. He had taken gelsemium as directed with the exception that he had slept through, omitting three doses. Pains in the head and neck were moderately severe, and meningismus was marked. The spinal fluid had 44 lymphocytes per cubic millimeter, and the Pandy test was positive (2 plus).

He was returned to his home where his mother, a capable farm woman, took charge of the nursing. Gelsemium was increased to 5 minims every two hours. As adjuvant treatment, phenobarbital ( $\frac{1}{2}$  grains three times daily), ascorbic acid (150 milligrams three times daily), and hot packs were given.

On October 17, the third day from the onset, he was visited twice. The temperature remained constant at 101 F., pulse rate 100 per minute, and respirations 20 per minute. He complained of severe headache. There was marked meningismus with pain in the neck, down the back, and in the legs and arms, associated with muscular spasms.

The following day his temperature was 101.5 F., pulse rate 95 per minute, and respirations 22 per minute. Some weakness was noted in the right arm and left leg.

The fifth day of illness the temperature was 99.5 F., pulse 80, and respirations 18 per minute. Tincture of gelsemium (5 minims every two hours) was continued, omitting one dose in twenty-four hours because respirations were normal, indicating an optimum of therapeutic level had been reached.

On the sixth and seventh days, temperature remained 99 F., pulse rate 75 per minute, and respirations 18 per minute. Meningismus continued with frequent painful muscular spasms and generalized weakness.

The temperature, pulse rate, and respirations were normal on October 22, the eighth day of illness. All symptoms were improved, and it was

felt that the danger of paralysis was largely past. Gelsemium was continued in the same doses (5 minims), but the interval between medications was lengthened from two to three hours.

From then on through October 28, the fourteenth day of illness, there was a slow gradual improvement. He continued to have occasional painful muscular spasms. Gelsemium was decreased to five minims three times daily, being discontinued altogether November 20. He was allowed to sit up on November 10, the twenty-seventh day. He regained strength gradually and was able to help with light farm work by December 10. In the spring of 1946, he resumed full charge of his 160-acre farm unaided.

CASE II—W. H., a farmer 23 years of age, walked into the office on the second day of illness, Sept. 27, 1945. He complained of pain in the head, neck, and back. Facial expression was anxious, pupils were contracted, and meningismus was marked. Temperature was 101 F., pulse rate 120 per minute, and respirations 30 per minute and irregular. The spinal fluid contained 17 lymphocytes per cubic millimeter, and the Pandy test was positive.

On Aug. 20, 1945, his 17 year old wife had been taken ill and removed to the State University Hospital at Iowa City where she developed extensive paralysis in both legs.

The patient was put at bed rest at home and carefully nursed by his mother and sister-in-law under close supervision. Four minims of tincture of gelsemium were given every two hours and increased to 5 minims the second day (third day of illness). Phenobarbital ( $\frac{1}{2}$  grain three times daily), 150 milligrams ascorbic acid daily, and hot packs were added.

At 10 p. m. September 28, the third day of illness, temperature was 100 F., pulse rate 68 per minute, and respirations 20 per minute. There was marked stiffness of the neck accompanied by painful muscular spasm with localized weakness of the right arm and left leg. One dose of gelsemium was omitted during the twenty-four hours because the maximum therapeutic effects were evident and unusual slowness of pulse rate suggested possible toxicity.

The sixth day of illness temperature was 99.6 F., pulse rate 75 per minute, and respirations 20 per minute. Some slight meningismus remained, but all symptoms were improving. The dose of gelsemium was reduced to 4 minims every three hours. On October 11 the dosage of gelsemium was further decreased to 5 minims three times daily, and the patient was allowed to sit up.

He continued to improve thereafter and was

able to call at the office on November 19. He was rather weak and there was still some pain and weakness in the left leg which fatigued easily, but there was no demonstrable muscular paralysis. He was directed to take gelsemium, 5 minims three times daily, only when necessary for relief of muscular pain.

By May 1, 1946, this complaint had practically disappeared, and he was doing all of his own farm work. On measurement, the left leg was one-fourth inch smaller in circumference than the right leg, but there was no clinical evidence of weakness or atrophy of individual muscles or groups of muscles. He had regained his usual weight and strength.

### Results of Treatment

During two epidemics, 1910 and 1945, in Cerro Gordo County, Iowa, sixty cases of acute anterior poliomyelitis have been diagnosed during the preparalytic stage and treated in accordance with the schedule described. Any case concerning whose diagnosis there was reasonable doubt was omitted from this series. Since the persons omitted escaped paralysis, their exclusion does not influence conclusions unfairly.

Of 60 patients, 37 were treated in 1945, 23 in 1910. Four developed paralysis in 1910, none in 1945. The series represented a fair cross section of the disease clinically. Some were relatively mild and might have escaped complications regardless,<sup>10</sup> but at least 75 per cent had muscle spasm, some both extensive and severe.

Concerning the paralyzed individuals, three were seen late and gelsemium begun on the fourth day within fifteen hours or less of the onset of paralysis, which was extensive and permanent. The fourth case had an exceptionally severe onset with convulsions, was diagnosed and treated early, but developed paralysis of the right quadriceps extensor muscle which subsequently made a satisfactory clinical recovery.

In 1945, gelsemium was administered in slightly larger doses and drug concentrations maintained at slightly higher levels than were believed safe in 1910.

### Discussion

The true incidence of paralysis in acute poliomyelitis cannot be estimated accurately.<sup>9, 10, 11</sup> In 1916,<sup>8</sup> 27 states reported 27,363 cases, most of whom were paralyzed. In 1944<sup>8</sup> there were 19,053 cases in 48 states and the District of Columbia with a considerably lower paralysis incidence which was thought to be largely attributable to improved clinical recognition of mild or abortive infections. An unknown number of

persons, possibly large, are infected and recover without clinical evidence of damage to the nervous tissues. Such cases may not develop symptomatology to suggest the true diagnosis and may go unproved unless exceptional laboratory facilities for virus culture and antibody titration are available.

There were 84 known cases of poliomyelitis during 1945 in Cerro Gordo County, Iowa, the community from which the present report originates. Of these, 37 were treated as reported and did not develop paralysis; an additional five were seen personally after the onset of paralysis. The remaining 42 were transported to medical centers in Iowa City, Des Moines, or Minneapolis and St. Paul, Minn., and all except two were known to have been affected by paralysis to some degree. There were two deaths among them. The extent to which transportation in the early phases of the illness may have contributed to permanent nerve cell injury in this group is not known. It would seem reasonable to suspect, as has been suggested by others, that movement may increase muscle spasm; if so, and our theories are correct, transport is contraindicated.

The 1910 epidemic in Cerro Gordo County was studied for the United States Public Health Service by Frost,<sup>12</sup> who reported 57 cases with immunologic data. The survey did not include the entire county. There was considerable paralysis observed, although pertinent figures on the exact incidence are not available. The incidence was greater, however, than the 17 per cent seen among 23 individuals treated with gelsemium as reported above.

It seems possible a larger experience with gelsemium in poliomyelitis may show poorer results than the relatively small series presented. The present report is made in hopes of stimulating more extensive investigation. For instance, it is becoming apparent to us that gelsemium may have considerable use in postparalytic stages of poliomyelitis, in management of painful muscular spasm, and in helping to control contractures. We have treated 16 such patients to date, including the 5 cases mentioned above, but the material is insufficient for further communication at this time.

Gelsemium's toxicity is reemphasized for the benefit of physicians who may contemplate its use, and the importance of careful control in accord with some schedule similar to the one described, is urged. Judging from personal experience on many times sixty patients without untoward incident and from the fact that gelsemium was in years gone by a common constituent



of many sedative mixtures, not having been abandoned because of excessive toxic hazards, it seems safe to conclude that its toxicity is not necessarily a contraindication to its use, especially if potential rewards can be shown.

It is impossible at the present time with the data available to compare the effectiveness of the several antispasmodic procedures in use. Their individual effectiveness would seem to depend upon their relative success in relaxing and reducing spasm in somatic muscles, since it seems evident that such spasms, if uncontrolled, have an adverse effect upon the inflammatory process in the anterior horns of the spinal cord. The exact mechanism of such action is not understood, but it is thought there may be a reflex relationship to the degree of congestion. This in turn has a direct bearing upon the likelihood of permanent nerve cell damage. At any event, pending control of the infection itself, this approach seems to offer considerable hope for escaping paralysis, provided there is early and accurate diagnosis and treatment. It seems probable that the success of a given form of antispasmodic therapy may depend as much upon the familiarity, skill, and devotion of the individual physician with his remedy as upon the remedy itself.

### Summary

1. A total of 60 individuals diagnosed acute anterior poliomyelitis during two epidemics are reported from Cerro Gordo County, Iowa.

2. These cases were treated with gelsemium (yellow jasmine root) for its antispasmodic action according to a schedule described.

3. Judging from the results (an incidence of less than 7 per cent of cases with clinical paralysis) the drug is effective if diagnosis can be made early and treatment begun before there is permanent damage to the nervous system.

4. Gelsemium, in common with many pharmaceutically potent remedies, is toxic. The margin between its therapeutic and toxic concentration is reported to be narrow. Nevertheless, its apparent effectiveness merits careful investigation, and its use seems warranted in view of the results, provided it can be done under careful supervision.

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## STREPTOCOCCIC PNEUMONIA

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The opportunity to study epidemics of hemolytic streptococcic disease occurs only about once in each medical generation. Epidemics of this type seem to be largely confined to wartime conditions; during the intervals between wars, while these infections do occur fairly commonly, they do not occur in epidemic form.

Doctors who were active during World War I are fairly familiar with at least the clinical manifestations of streptococcic pneumonia. This pneumonia was of rare occurrence during the 1920's and 1930's, however, and it was not until barracks living conditions and excessive movements of men about the country began that we had a recurrence of beta hemolytic streptococcic infections in epidemic form. I find that nearly everything I have to say was published during World War I, but such knowledge was largely forgotten during the interval.

Streptococcic epidemics in this war were nowhere as widespread as they were during the last war, due probably to good fortune as much as to increased knowledge. It so happened that I was stationed for two years in a camp and hospital which had the highest incidence of this type of disease of any place in the country. These remarks represent more or less personal experience with streptococcic infections numbering well over 100,000 cases and with nearly 4,000 cases of streptococcic pneumonia.

The basic epidemiologic opinion holds that the various strains of the beta hemolytic streptococcus under ordinary circumstances are not primarily invasive, but that infections with these organisms are normally secondary to other infections, notably virus infections. During epidemics, apparently due to rapid transmission from host to host and possibly due to other factors, the organism may attain the ability to invade primarily. During

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our experience at least two strains, No. 17 and No. 19, exhibited this ability.

The entire nation received a seeding of new infections with streptococci during the wartime period. One may expect that the incidence of these infections will gradually subside during the ensuing years, but they are far more common now than they were in the past—hence, the importance of a continued interest in them.

With this brief forword I wish to discuss three types of streptococcic pneumonia and to distinguish them from pneumococcic and virus pneumonias. I use the term virus pneumonia advisedly in counterdistinction to the accepted term of primary atypical pneumonia because of the fact that in our early experience the use of the official term caused some confusion. As we first began to see streptococcic pneumonias, many doctors who had been recently briefed thoroughly on the prevalent virus pneumonia were inclined to so diagnose streptococcic pneumonia. The differentiation is not always easy since streptococcic pneumonias are atypical and their etiology is sometimes obscure.

The first type of streptococcic pneumonia is a disseminated pneumonia secondary to some other disease and usually caused by an organism already present in the patient's respiratory passages. This is the form most commonly seen by non-military practitioners and usually seen in the aged and in infants. It differs little from bronchopneumonia due to any other organism which may be present, with which I presume all doctors are familiar and which consequently I shall not discuss.

The second type of streptococcic pneumonia, which was very common and which caused great difficulty in our experience, was again a secondary pneumonia. It was usually secondary to one of the virus diseases such as measles or influenza, or it was secondary to a streptococcic infection of the oropharynx. This type, which I shall call focal pneumonia, may occur at any time, but it becomes common only when the incidence of streptococcic disease achieves epidemic proportions. It is relatively prevalent in civilian practice today and is characterized by rather sharp exacerbations of symptoms when the pulmonary disease obtains a foothold on a pre-existing infection. The patients are acutely ill, having irregular fever, cough, chest pain, and prostration. They are usually dyspneic and show a variety of physical findings which might be present with involvement of any lobe or part of a lobe. The laboratory findings are those of acute infection with the leukocytosis tending to run between 10,000 and 20,-

000 per cubic millimeter, the increase being largely polymorphonuclears. X-ray of the chest shows no typical lobar involvement, but certain types of involvement tend to be characteristic. The most common pattern is a bilateral basilar pneumonia involving both lungs. This consolidation, which is usually less dense than a pneumococcic consolidation, tends to hug the heart borders and to give somewhat the appearance of being an exudate which has drained down the lower bronchial tree. The next most common involvement is a unilateral picture of the same type. Lobar pneumonia, hilar pneumonia, and diffuse lobular pneumonia all occur.

While we were busy with many cases of this type during our epidemic, *primary* streptococcic pneumonia appeared. Fortunately, only 30 to 40 cases represented a primary pulmonary invasion by the organism. These patients were prostrated from the onset. The toxic manifestations of dyspnea, cyanosis, and a rapid, thready pulse predominated. In no case was there any doubt of the critical nature of the disease. The onset was as dramatic as in the case with primary pneumococcic pneumonia, but the toxic manifestations were greatly exaggerated. Physical findings were variable, depending on the part of the lung involved, but were those of early consolidation. X-ray in many of these cases revealed multiple abscesses one to three centimeters in diameter which were scattered throughout the involved portion of the lung. They appeared to have no fibrotic capsule and usually showed a fluid level. Many of these patients recovered, although all were desperately ill and several of our cases died within the first twenty-four to seventy-two hours of their illness. Postmortem examination revealed an early consolidation, in the body of which the abscesses were scattered. The abscess appeared to be a product of the lytic action of the organism, and there was almost no reaction around the periphery. Those who recovered usually showed rapid healings of these abscesses and without x-ray residual signs of their presence. A feature of all forms of streptococcic pneumonia is the early and rapid development of pleural effusion. These effusions all contain organisms and pus cells and should be considered empyema, although under chemotherapy not all of them become frankly purulent.

Streptococcic pneumonia then may be primary or secondary; disseminated, lobar, or focal. Most commonly it is a secondary pneumonia with a focal distribution in the lung. It should be especially suspected when signs of pneumonia develop in the course of another disease, notably influenza.



measles, or streptococcic pharyngitis. The bacteriologic diagnosis is difficult since many streptococci are normal inhabitants of the respiratory passages, and their bacteriologic separation is a prolonged process. The diagnosis, therefore, is largely a clinical one, and is at least partially made on the grounds of exclusion. The presence of a pre-existing streptococcic throat infection is strong presumptive evidence that the pneumonia is also caused by this organism. Failure to find a typable pneumococcus is also very suggestive. The co-existing development of otitis media may serve to give the proper diagnosis. In many cases, particularly following virus diseases, the infection in the lung is not preceded or accompanied by any other manifestation of streptococcic disease, making a bacteriologic diagnosis impracticable. However, a secondary pneumonia, which is focal in its distribution and which produces toxic effects on the patient out of proportion to the fever, leukocytosis, or physical signs, should be considered streptococcic until proved otherwise.

The differentiation from primary atypical pneumonia, etiology unknown, or virus pneumonia may present some difficulty. The onset is always secondary to another disease. The patients are usually more ill and the laboratory signs of infection are more marked. The x-ray findings of streptococcic pneumonia do not show the soft, fuzzy consolidated areas which are characteristic of the virus type. Also, the tendency to attack the upper lobes is very slight, while it is quite marked in virus pneumonia. Physical signs of consolidations, which are very difficult to elicit in virus pneumonia, are comparatively definite in streptococcic pneumonia, though they do not follow as clear-cut a pattern as do those of pneumonococcic pneumonia. The course of streptococcic pneumonia without specific treatment tends to be irregular. A high percentage, in some instances as great as 50 per cent, have developed empyema, and even those which remain uncomplicated show a prolonged course with resolution by lysis. Under chemotherapy with sulfonamide drugs, only about 10 per cent will develop empyema, and about 80 per cent make a fairly rapid and uncomplicated recovery. Under penicillin therapy these figures are further improved, but a residual small number of cases will develop empyema or will have a prolonged infectious course. A great deal depends upon the early institution of appropriate therapy and hence the importance of being alerted to the presence of this pneumonia. Although it is most commonly seen in epidemic form, the hemolytic streptococcus has become so widespread

during the war era that we will all see sporadic cases frequently.

In view of the occasional difficulty in differentiating between virus pneumonia and that caused by the Streptococcus, it seems logical that chemotherapy or antibiotic therapy should not be withheld pending a diagnosis. Indeed, failure to improve under this type of therapy may be the final criterion by which the diagnosis is made. Certain cases of virus pneumonia do follow other diseases, do show a leukocytosis, and the physical and x-ray signs may not be distinguishing. In view of the high hazard of empyema in the streptococcic variety, it would seem fortuitous to withhold therapy pending a diagnosis in these cases. Especially is this true of the use of penicillin which has less potentiality for doing harm than almost any other agent used.

Other therapeutic measures are of great value in streptococcic pneumonia. Oxygen is most useful in the first twenty-four hours. Immune human serum was occasionally used with marked success in our series of cases. Patients should be examined daily for the appearance of a pleural effusion. The type Streptococcus can usually be discovered from this fluid, and consequently a tap should be made on the first suspicion of hydrothorax. The management of these empyemas is of great interest and importance, but it is outside the scope of this paper.

#### Discussion

*Dr. Arthur D. Woods (State Center):* In the elucidation of this subject of Streptococcus pneumonia the essayist has emphasized five main points: (1) Streptococcus pneumonia is rare, the disease being confined to wartime but seen occasionally in civilian practice; (2) Streptococcus pneumonia does not occur in epidemic form between wars; (3) it is important to remember that the beta-hemolytic streptococcus is not primarily invasive but is prone to be secondary to virus infections; (4) this form of pneumonia in at least 10 per cent of the cases will have an early and rapid development of pleural effusions; (5) Streptococcus pneumonia runs a prolonged, atypical course with resolution by lysis. Even with effusion only 10 per cent go on to empyema under chemotherapy with sulfonamide drugs and do even better with penicillin.

As regards the early accumulation of fluid in these cases of Streptococcus pneumonia, the Bulletin of the United States Army Medical Department for February, 1945, has this to say:

"In Streptococcus pneumonia, fluid is detected in the pleural space early in the attack and accumulates with remarkable rapidity so that one side of the chest appears to be filled within twenty-four hours after the first evidences of pleural fluid are

detected. Such rapid accumulation of pleural fluid in a patient with a severe acute infection is highly diagnostic."

The following brief history would seem pertinent to this discussion. A boy of 6 years was seen January 30 with an obvious pneumonia. After liberal doses of sulfadiazine for the first twenty-four hours with no improvement, penicillin was started. February 1 the leukocytes were 18,000 and x-ray showed cloudiness over the whole left chest. That night the child had a severe hemoptysis. Penicillin was continued every three hours night and day. On February 3 the x-ray had all the earmarks of an extensive pleural effusion. By February 6, after one week's illness with no sign of crisis and no improvement in the clinical picture, thoracentesis was done. Two hundred and fifty cubic centimeters of straw-colored fluid were drawn off. Polymorphonuclear cells were found in the fluid but no micro-organisms were present. Mouse inoculation was likewise negative. Since the hemoptysis had been a very disturbing incident, guinea pig inoculation was also carried out. Autopsy of the guinea pigs at the end of six weeks revealed no evidence of tuberculosis. There was some improvement following the withdrawal of the pleural fluid, but early in the morning of February 10 the temperature shot up to 104 F. and the white count was 36,000. This boy was not afebrile until the latter part of February, the temperature slowly subsiding by lysis.

In the final interpretation of this case the atypical course, the rapid accumulation of pleural effusion, and the termination by lysis made us believe this was a *Streptococcus pneumonia* secondary to an influenza invasion. Inasmuch as the examination of the pleural fluid was not made until the end of the first week of the illness after the exhibition of liberal amounts of penicillin, the absence of micro-organisms in the fluid could be accounted for by the action of the penicillin. Without the sulfonamides and the penicillin this case would probably have developed a vicious empyema or ended fatally or both.

*Dr. Frederick W. Mulsow (Cedar Rapids):* Dr. McFarland covered pretty well the clinical symptoms and the clinical signs of streptococcic pneumonia. Hence, I shall limit my remarks to *Streptococcus*.

The *Streptococcus* is a modern organism in many ways and has come to us through civilization. We find that among primitive tribes in the tropics or the polar regions we are not bothered much with streptococcic pneumonia or streptococcic infections of any kind. Hence, *Streptococcus* is a modern disease or modern type of organism. Nobody knows just how many there are, but if possible doctors should attempt to identify the type of *Streptococcus* with which they are working. Of course, that is not always possible, but one should attempt to determine the origin of the infection, or determine its spread.

When a case arises, the doctor likes to know where it came from and where it is going to spread, while

public health officials like to know the type of organism with which the physician is working.

A doctor should also know the type of organism with which he is working because some strains are now becoming modernized and are resisting the sulfa drugs as well as penicillin. It has been found in several camps that certain varieties of the *Streptococci* yield to neither sulfa drugs nor penicillin. Thus, knowing the type at the start will avoid delay of treatment with the proper drug.

Knowledge of the type will help to determine the complications that arise, that is—whether it is the same type which caused the infection or whether it is a new type. For instance, in scarlet fever with the complication of otitis media or some other infection, one may assume that it is the same *Streptococcus* that caused the scarlet fever, but it may be some other *Streptococcus*.

There have been many attempts to classify the *Streptococci* but none has been very successful. The basic medium or method of classification is their action on blood.

We have said that there are three types, but they are beginning to resolve this down to two types: those which hemolyze and those which do not. There are the two types of nonhemolytic—the nonactive and the viridan type, but it is very often hard to tell one from the other. The most recent method of determining the type is through the following groups or the following mediums: (1) their action on blood; (2) whether or not they will grow at 10 F. or at 45 F.; (3) whether or not they will grow in solution containing 6.5 per cent sodium chloride; (4) their ability to reduce methylene blue in a broth with an acid reaction of 9.6 Ph.; and (5) their ability to produce ammonia compounds.

According to this there are four groups. The first group is the pyogenic group which contains most of the hemolytic streptococci. These hemolytic streptococci are typed by their serology of which there are about forty-two different ones.

The second group is that which does not hemolyze blood, growing at 45 F. but not at 10 F. This type is known as *Streptococcus viridans*, and it is negative in the other findings.

The third type is the lactic acid type, which is usually found in milk, growing at 10 F. but not at 45 F. Also, most of them will grow in 6.5 per cent sodium chloride solution.

The fourth is the enterococcus group which is found in the gastro-intestinal tract. About 7 to 10 per cent of these will hemolyze blood. Otherwise, they are positive for the other test. They will grow at 10 F., at 45 F., and also in 6.5 per cent sodium chloride solution, and they reduce in methylene blue.

Thus, there are four types of *Streptococcus*. With knowledge of these types, physicians may tell where the infection comes from and where it goes, enabling them to help control these diseases.



## PRIMARY ATYPICAL PNEUMONIA

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During the 1930's knowledge concerning the diagnosis and treatment of pneumonia, using the term in the broadest sense, underwent rapid change due to the development of type-specific sera and the sulfonamide drugs. Because these agents dealt with pneumococcal pneumonia, attention was focused on that disease to the apparent neglect of the pneumonias of non-pneumococcal origin. From about 1935 to 1938, however, an increasing number of pneumonias showed few or no pneumococci, and frequently those found could not be typed. Many of these cases were unlike typical pneumococcal pneumonia in their clinical features.

Although there may have been a widespread suspicion that "atypical" pneumonias were becoming more prevalent, there were few published observations to that effect. In 1935 Bowen<sup>1</sup> reported from Hawaii a series of cases of "pneumonitis" occurring in soldiers. The cases were characterized by a mild course, slight physical signs, and spotty shadows in the x-ray films. At about the same time Gallagher<sup>2</sup> reported sixteen cases of mild bronchopneumonia occurring in a boys' school, and in 1936 Allen<sup>3</sup> of Texas described a mild form of pneumonia conforming closely to the syndrome under discussion. In 1937 Scadding<sup>4</sup> reported four cases of "disseminated focal pneumonia" occurring in England. In 1938 H. A. Reimann<sup>5</sup> published a paper entitled "An Acute Infection of the Respiratory Tract With Atypical Pneumonia: A Disease Entity Probably Caused by a Filtrable Virus," reporting 10 cases seen during the year in Philadelphia. He described the clinical picture clearly, emphasized the nonbacterial and noninfluenzal origin of the disease, the lack of response to sulfonamide drugs, and the presence in two cases of an unusual virus which caused pneumonia and encephalitis in mice. This paper attracted enough attention to make the profession "atypical pneumonia conscious." Many names have been proposed for the disease or group of diseases. It has been designated by the army as "Primary Atypical Pneumonia, Etiology Unknown." Justifiably or not, the term "Virus Pneumonia" has come into wide use since 1938. The numerous papers that have appeared on the subject have clarified many points but leave the etiology obscure.

Recognizing that the term "primary atypical pneumonia" may apply to a group of diseases rather than to a single entity, the evidence in favor

of a virus or viruses as a cause may be summarized as follows. The incubation period of about ten to twenty-six days is similar to that in other diseases known to be due to viruses. Viruses which caused pneumonia in susceptible animals have been obtained from nasopharyngeal washings and from the blood of patients. These viruses obtained by several workers in different parts of the world have differed from all known viruses, but in several instances they have resembled those of psittacosis, lymphocytic choriomeningitis and lymphogranuloma venereum. The temperature curve in some cases is biphasic. The pathologic changes in the lungs are similar to those in pneumonias of known virus origin. On the other hand there has been a striking failure of all workers to find a virus consistently or to reproduce the disease in more than a few experimental animals. The disease in many respects resembles "Q" fever, which is due to Rickettsia, but those bodies have not been found in primary atypical pneumonia. Until further evidence accumulates, therefore, the question of causation by a specific virus or viruses remains unsettled.

The disease occurs both sporadically and in epidemics, the latter having occurred in many military installations. It affects males and females equally, and by far the highest incidence is among young adults. It occurs in all seasons, apparently being conveyed by contact. A succession of cases in a family or household permits a fairly accurate estimate of the incubation period as about ten to twenty-six days in contrast with one to two days for influenza.

The onset of the disease is usually insidious, the early symptoms being not unlike those of a common cold. Chilliness, headache, malaise, fever, and dry unproductive cough appear and increase during the first few days. The temperature may range as high as 104 and 105 F., there usually being an evening peak and a fall of two or three degrees in the morning. Profuse sweating is common during the febrile course of the disease, which may be as short as six days or as long as six weeks. The temperature may return to normal for a few hours or a day only to rise again. The headache and malaise are out of proportion to the objective appearance of illness of the patient.

The physical signs on the whole are inconspicuous as compared to the temperature chart. In the milder cases the patient looks only slightly ill. Dyspnea and tachypnea are absent or slight except in the most severe cases. Cyanosis is usually absent but does occur. The pharynx is usually not swollen and only mildly injected. Cervical lymphadenopathy is uncommon. There may be no

abnormal physical signs in the chest during the first few days or at any time. Usually, however, a few crepitant râles are heard with or without one or more small areas of dullness. There may be suppression of breath sounds. The physical signs, if any, tend to increase as the disease progresses, and commonly they are much more marked after the fever has subsided than during its height. The appearance of diffuse sibilant râles throughout one or both lungs with or without fine and medium moist râles occurs frequently, usually after the first week. These râles, which are indistinguishable from those of bronchial asthma, occur in non-asthmatic individuals. The same finding was common in the pneumonias complicating influenza in 1918. Severe cases may show dyspnea, moderate tachypnea, and considerable cyanosis, requiring oxygen administration for a few days or a week or two. The pulse is slow, relative to the temperature, and early, but in the second and third week it tends to increase as the temperature comes down. Movement of the alae nasi is rare, as are herpes and abdominal distention. Occasionally the spleen is palpable for a day or two. There may be scanty mucoid sputum, increasing somewhat as the disease progresses, and it may be occasionally blood streaked.

The routine laboratory findings deviate only slightly if at all from normal. The total leukocyte count is within the normal range in two-thirds of the cases. The remainder show a slight leukocytosis or a leukopenia. A definite leukocytosis with an increase in the neutrophils suggests secondary bacterial infection. There appears to be no tendency toward the development of anemia. As the disease progresses, the neutrophils and monocytes tend to decrease, while the lymphocytes and eosinophils increase.<sup>6</sup> The late appearance of eosinophilia is of interest in view of the similar late appearance of asthmatic râles. The urine may show febrile albuminuria, but little else. Blood cultures are sterile in the absence of complicating bacteremia. The sedimentation rate of the erythrocytes is moderately increased. The x-ray changes are always much more striking and extensive than one would suspect from the physical signs and may furnish the only proof that pneumonia exists.

From the clinical standpoint complications are few, but with roentgenologic aid more complications are apparent. Higley, Warren, and Harrison<sup>7</sup> found recognizable complications in two hundred and two or 42 per cent of four hundred and eighty cases. The pulmonary complications included: recurrence, 8 per cent; atelectasis, 2 per cent; bronchiectasis, 0.8 per cent; lung abscess, 0.6

per cent; thin-walled cavitation, 1.0 per cent; delayed resolution (over three months), 0.6 per cent. The pleural complications were: pleurisy as evidenced by pleuritic pain, 19 per cent; pleural effusion, 2.0 per cent; residual pleural thickening, 1.5 per cent; empyema, 0.8 per cent; and pneumothorax, 0.4 per cent. Other diseases which are sequelae include: bronchial asthma, 3.0 per cent; tonsillitis, 1.0 per cent; otitis media, 2.0 per cent; arthritis, non-purulent, 0.4 per cent; herpes simplex, 0.8 per cent; pericarditis, Bell's palsy, and brain abscess, each 0.2 per cent. The mortality in the entire group was 0.6 per cent. Blades and Dugan<sup>8</sup> described a group of cases to which they applied the term "pseudo-bronchiectasis." These cases showed typical findings of bronchiectasis during or immediately following primary atypical pneumonia which cleared up within a few months. In cases which show persistent evidence of bronchiectasis it is difficult to exclude the possibility that it existed previously. More time will be needed to determine whether or not the disease leads to permanent bronchiectasis. On the whole, the pulmonary and pleural complications are comparatively benign and tend to clear up.

Because of the low mortality rate there have not been many opportunities to study the pathologic changes in the lungs. The lung surface may show fibrinous exudate over a subjacent pneumonic area; elsewhere it is smooth and glistening. The lung is heavy and boggy. The bronchi show a reddened mucosa, and they are filled with pink, frothy material. There are multiple areas in the lungs which feel like consolidation, but on section they seem filled with dark reddish fluid rather than being truly consolidated. The hilar lymph nodes appear normal. Microscopically, the bronchi are filled with cells, about half of which are round cells and half polymorphonuclears. The bronchial walls are infiltrated by a cuff of round cells with a few polymorphonuclears, and the alveoli are filled with round cells. The great predominance of round cells and scarcity of polymorphonuclears everywhere except in the bronchi is the striking finding. Bacteria are usually absent in the alveoli and interstitial tissues; there are few in the bronchi.<sup>9</sup>

The diagnosis usually presents no great difficulty. In a few cases, however, it may be hard to distinguish between primary atypical pneumonia and pneumococcal pneumonia, pulmonary tuberculosis, bronchiectasis in the acute stage, and neoplasm. If there is a rather large area of involvement, corresponding roughly to a lobe, with a few pneumococci recovered from the sputum or pharynx, it may require a few days observation to decide



that the patient does not have lobar pneumonia. The development of the signs of typical consolidation, high leukocytosis, and the absence of shifting physical and x-ray signs serve to identify lobar pneumonia. When a fan shaped or spotty area of infiltration occurs in the upper lobes and is slow to resolve, it may be impossible to exclude tuberculosis except by repeatedly negative sputum examinations and several months' observation to be sure that the infiltration has disappeared.

In the absence of a clear-cut history of bronchiectasis, the recurring pneumonitis which is seen from time to time in the bronchiectatic lung might be easily mistaken for primary atypical pneumonia or vice versa. The appearance of bronchiectatic sputum as the pneumonitis subsides, bubbling râles, and when indicated bronchography, will identify bronchiectasis. The diagnosis of pulmonary tumors is notoriously deceptive. Those of bronchial origin may give no hint of their presence unless hemorrhage or bronchial obstruction occur. In the latter event, the atelectasis and pneumonitis which result may imitate the picture of primary atypical pneumonia very closely. The headache and malaise are likely to be absent, and the physical and x-ray signs are strictly unilateral. A spread to the other lung is frequent in primary atypical pneumonia.

Treatment consists primarily of bed rest and adequate nursing care until the temperature has been normal for several days. Probably it is desirable not to let the patient up and about until all physical signs have disappeared, although several have been sent home with residual râles to complete their convalescence at home with no apparent ill effect. Steam inhalation may be of some benefit, particularly if laryngitis is present. Codeine is usually needed to ease the hacking cough. The sulfonamide drugs and penicillin are of no value unless secondary infection due to susceptible bacteria occurs. Serum or blood from patients convalescing from the disease have been used in a few cases with apparently good results. Aminophylline has been suggested by Roberts.<sup>10</sup> Oxygen by mask, nasal catheter, or tent is indicated if cyanosis is present.

In summary, primary atypical pneumonia is a disease or group of closely related diseases, possibly but not certainly of virus origin. It may be mild or severe; the complications are for the most part benign; the late sequelae are few; the mortality is one per cent or less. Treatment is largely symptomatic and supportive. The sulfonamides and penicillin are of no value in the uncomplicated case.

	No.	Per Cent
Uncomplicated cases .....	278	58.0
Total complicated cases .....	202	42.0
Pulmonary complications:		
Recurrence .....	37	8.0
Atelectasis .....	11	2.0
Bronchiectasis .....	4	0.8
Lung abscess .....	3	0.6
Thin-walled cavitation .....	5	1.0
Delayed resolution (over three months) .....	3	0.6
Pleural complications:		
Pleurisy, as evidenced by pleural pain .....	93	19.0
Pleural effusion .....	11	2.0
Residual pleural thickening .....	7	1.5
Empyema .....	4	0.8
Pneumothorax .....	2	0.4
Other diseases as sequelae:		
Bronchial asthma .....	16	3.0
Tonsillitis .....	6	1.0
Otitis media .....	8	2.0
Arthritis, non-purulent .....	2	0.4
Herpes simplex .....	4	0.8
Pericarditis .....	1	0.2
Bell's palsy .....	1	0.2
Brain abscess .....	1	0.2
Deaths .....	3	0.6

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ROENTGENOLOGICAL ASPECTS OF  
PRIMARY ATYPICAL PNEUMONIA

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The roentgenological aspects of primary atypical pneumonia have already been described in numerous excellent papers (note bibliography 1, 2, 3, 4, 5, 6, 7, 8, 9, 12, 13). It is not our purpose to duplicate these works, but to add some roentgen observations made at the Station Hospital of Jefferson Barracks, Mo., from 1942 to 1944. Between June 1, 1942, and August 10, 1943, there were 1,862 cases of primary atypical pneumonia admitted to this hospital<sup>10</sup> and in the ensuing year there was an approximately equal number.

It has been pointed out that the roentgen examination is needed only for diagnostic corroboration in the uncomplicated cases.<sup>10</sup> However, the roentgenogram reveals the presence or absence of pulmonary disease and its extent and location. Because the physical signs of this type of pneumonia

are often absent, meager, or unreliable, roentgen examination is usually necessary for a definite diagnosis. Some cases were sent to the hospital after being diagnosed from a routine roentgen examination, and these patients had little to complain of other than perhaps a "cold." Undoubtedly many such cases are undiagnosed where roentgen examination is not used. It has been well expressed by others<sup>2</sup> that positive statements as to the presence or absence of pulmonary involvement cannot be made without roentgen examination, and that the film of the chest is the "final court of appeal in the diagnosis without which few cases can be definitely diagnosed."<sup>6</sup>

The diagnosis can be made from the chest film with a high degree of accuracy in the great majority of cases, particularly in the epidemics such as were experienced in the inclement months of 1942, 1943, and 1944. It is true that the final diagnosis should be made only after carefully considering both the clinical and roentgen findings, but in almost all cases observed in the period, the roentgen diagnosis had to be and was made without the aid of the clinical aspects.

It has been stated<sup>9</sup> that it would be difficult to establish roentgen criteria for a "typical" case, but we believe that the appearance of the roentgenogram does follow as nearly a typical pattern as do most diseases. Numerous descriptive terms are used in discussions of roentgen manifestations such as "wire glass," "flocculent densities," "ground glass," "linear accentuations," "structural accentuation,"<sup>3</sup> "veil-like shadow,"<sup>7</sup> and "veil-like haze."<sup>9</sup> It is believed that the manifestations can be resolved into three groups without use of such terms: (1) widening and blurring of bronchovascular markings in part of a lobe or lobes; (2) diffuse increase in density of part of one or more lobes with bronchovascular markings still visible through the increased density; and (3) a combination of (1) and (2). These changes are seldom seen in an entire lobe and are most common in the lower lobes. The hila may or may not be involved. Hilar involvement has been reported in most cases by others,<sup>2,6</sup> but such has not been true in our experience. Involvement of the extreme periphery of the lung with no demonstrable disease between it and the hilum was a common finding.

The roentgen changes become apparent two or three days after onset of symptoms. Resolution in the uncomplicated case then consists of diminution of the increased density and slow regression of bronchovascular shadows to normal size and outline. In some cases during resolution the pneumonic area became more extensive in total area

involved while the degree of density diminished. Frequently observed were flat, disc-like areas of atelectasis remaining in the pneumonic site during or after resolution, but there were no cases of massive atelectasis. The time required for clearing of the chest roentgenographically is variously reported as eleven and one-half days,<sup>4</sup> thirteen and one-half days,<sup>6</sup> two weeks,<sup>3</sup> nineteen days,<sup>1</sup> and from two to six weeks.<sup>9</sup> The average time of clearance in our uncomplicated cases was thirty-two days.<sup>10</sup>

The three conditions from which primary atypical pneumonia had to be differentiated most frequently were bacterial lobar pneumonia, bronchiectasis, and tuberculosis. Various opinions have been expressed relative to differentiating primary atypical pneumonia from other pneumonia. Stein and Kresky, reporting 950 cases of bacterial pneumonia and 1,112 cases of primary atypical pneumonia,<sup>5</sup> conclude that "any attempt to determine the probable etiology of a case of pneumonia from the roentgenogram alone is an extremely inaccurate procedure." Others<sup>8</sup> believe that the chest film is diagnostic, not only of pneumonia but of atypical pneumonia, in most cases. We found that in some instances primary atypical pneumonia and bacterial pneumonia simulate each other closely. In these cases the roentgenogram was made early in the illness—too early for the typical dense consolidation of lobar pneumonia to have occurred. Differentiation in these cases depended upon the white blood count, clinical course, and bacteriologic findings. In the vast majority of cases, however, the diagnosis of primary atypical pneumonia was readily apparent from the evidence presented by the chest film alone.

Changes of pneumonia occurring in one or both pulmonary bases in their medial portions may simulate or even duplicate bronchiectasis with associated pneumonitis. Here again the history aids in the differentiation, but diagnostic iodized oil instillation may be necessary to differentiate primary atypical pneumonia from bronchiectasis in those patients who do not have clearance within a month.

Primary atypical pneumonia occurring in the upper lobes simulates very closely the lesions of active pulmonary tuberculosis. (This was particularly true in seven patients who developed cavities within their pneumonic areas.) By further films differentiation is readily made in a few days at which time any change in the lesion will indicate its nontuberculous nature. These cavities were thin walled, contained fluid and air, had very little surrounding pulmonary reaction, were



not associated with the foul sputum of a pyogenic abscess, and all healed spontaneously. The illness was no more severe in these cases than in those without this complication. All these were studied from the standpoint of tuberculosis and coccidioidomycosis without positive findings.

There are only a few reports of the use of roentgen therapy in primary atypical pneumonia, but in these the results attained justify its employment. Correll and Cowan<sup>7</sup> report 23 patients treated within four days of admission, and in 95.6 per cent of the cases there was a reduction of 50 per cent in the febrile period, total number of sick days, and days for resolution as proved by x-ray. Of 9 patients failing to attain complete resolution in thirty days by other treatment, 7 had clear chest films within an average of four days following roentgen therapy. Oppenheimer<sup>11</sup> described the treatment of 56 cases of primary atypical pneumonia which had failed to respond to medical treatment. He concludes that a clinical cure was attained within a few days in 45 of the 56, that pulmonary consolidation disappeared within three to five days after roentgen therapy, that x-ray is the most effective mode of controlling persistent cough, and that the best results are attained in cases treated early.

In summary, we have observed that: (1) a definite diagnosis of primary atypical pneumonia is dependent on the roentgen examination; (2) the roentgen diagnosis is highly accurate, particularly in epidemics; (3) the roentgen manifestations are as typical as in most pulmonary diseases; (4) differentiating this type pneumonia from bacterial lobar pneumonia, bronchiectasis and tuberculosis offers difficulty in some cases, and (5) that roentgen therapy, as reported by others, is a beneficial therapeutic agent which should be utilized more frequently.

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### College of Medicine CLINICOPATHOLOGIC CONFERENCE June 10, 1946

#### Abstract of the Clinical History

A former school teacher, a white woman of 65 years, was admitted to the general surgical service at the University Hospitals on the evening of Apr. 29, 1946. She complained of severe nausea, vomiting, and abdominal pain of eight days' duration. In 1943 she began to have increasing "gas on her stomach." In 1944 she had an attack of sudden severe right upper quadrant abdominal pain followed by some nausea and vomiting, which was relieved by one hypodermic injection of morphine. Her physician at that time prescribed a low fat diet. During the following year and a half she had three additional episodes, and each was relieved by a single hypodermic injection of morphine. With none of these attacks was there associated chills, fever, or jaundice. There was never the typical radiation of pain of gallbladder colic. Following an attack on Feb. 25, 1946, some distress in the epigastrium persisted.

The last attack started eight days prior to this admission. At the onset it resembled previous episodes. Her local physician administered the customary hypodermic injection of morphine, but for the first time the drug failed to relieve the complaints entirely. When the effect of the drug had worn off the pain returned. She became conscious of more pain in the center of the abdomen, although it seemed most marked in the epigastric region. Vomiting became a pronounced feature of the picture. She vomited five to eight times each day from the onset of the last attack. She stated that the vomitus was bitter and foul. During the forty-eight hours prior to admission the vomiting was less pronounced. She had bowel movements almost daily, the last one being the evening before admission.

She had lost forty-eight pounds during the past two years, which she attributed to a diet low in calories. Until the recent acute attack her strength had remained good, and she had performed recent hard manual labor.

Physical examination revealed a moderately obese, intelligent, cooperative, obviously acutely ill patient. She had received morphine shortly before starting to the hospital and it was obvious that she was still under the influence of the narcotic. In spite of this, she was in considerable abdominal distress, was apprehensive about her condition, and requested relief from pain. Although her skin was moist, her tongue was dry and coated. The chest findings were not remarkable. The size of the heart was within normal limits. There was a soft systolic murmur, and the blood pressure was 142/60.

The abdomen was rounded, its wall thick, without herniae or laparotomy scars. There was moderate generalized abdominal tenderness, most marked in the upper abdomen, but with no rebound tenderness. No peristaltic sounds were heard on the several examinations of the abdomen. Rectal examination revealed a formed stool.

At the time of admission at 9 p. m. the temperature was 99.4 F.; the pulse rate was 110 per minute; the respiration rate, 16 per minute. Urinalysis revealed glucose. The blood examination showed the hemoglobin to be 16 gm. per 100 cc., red blood corpuscles 4,440,000, and white blood cells 16,000 per cu. mm.

She was admitted to the ward with a diagnosis of an acute cholecystitis with possible perforation of the gallbladder. The immediate treatment was directed toward relieving the dehydration. During the night she received 4,200 cc. of intravenous fluid. Part of the fluid was in the form of isotonic saline solution; part was 10 per cent dextrose in distilled water, and part of the solution was 5 per cent Amigen. There was no record of the patient voiding during that night.

The following morning she appeared toxic and responded poorly. Abdominal examination revealed a silent, distended abdomen. It was impossible to percuss the liver dullness. The white blood cell count had dropped to 7,200 per cu. mm. Wangensteen suction drainage and additional par-enteral fluids failed to change the rapidly progressive precarious condition. At 2 p. m. on the day following admission the oral temperature was 103.6 F.; the pulse rate was 120, and the respirations were 40 per minute. The blood CO<sub>2</sub> combining power was 49 volumes per cent. The blood serum amylase was 41 mg. Since conservative measures were associated with a rapid decline in the over-all picture, immediate abdominal exploration seemed indicated. The preoperative diagnoses included perforated gallbladder, acute pancreatitis, and perforated peptic ulcer.

The exploration was carried out under local in-

filtration anesthesia and the inhalation of nitrous oxide. When the peritoneum was opened many greatly dilated loops of small bowel presented in the operative field. Although the operation was simple to perform, requiring thirty-five minutes for completion, she failed to respond postoperatively; the temperature rose to 105 F.; the blood pressure fell, and death occurred twelve hours later.

### Clinical Discussion

*Dr. J. W. Dulin:* This patient's past story, dating back over a period of twenty-three years, seemed fairly typical of the symptoms obtained in patients with chronic cholecystitis and cholelithiasis. The occasional episodes of severe right upper quadrant pain, which had been relieved by the administration of single hypodermic injections of morphine, substantiated the impression of gallbladder disease. It must be remembered that the differentiation between peptic ulcer and gallbladder disease can often be made only by laboratory studies, particularly x-ray examinations of the gallbladder, stomach and duodenum. The duodenal ulcer patient may have severe upper abdominal pains, sudden in onset, relieved by a single injection of morphine. Between the occasional exacerbations there are no symptoms or only vague gaseous complaints. Peptic ulcer was considered in the differential diagnosis, explaining the recent 8 day illness on the basis of a perforation with localized abscess formation.

The past history seemed so typical of extra hepatic biliary system disease that we tried to connect the past story with her last and most severe illness. She stated that the last attack originally simulated previous episodes, but one of the interesting features of this attack was the failure of the one injection of morphine to give prolonged relief from the pain. It has been our experience that a patient with an acute attack of gallstone colic who fails to obtain relief from one injection of morphine should be considered as an individual having a serious complication of the gallbladder disease. Certainly repeated hypodermics of morphine are contraindicated. Too often these patients are found to have a perforated gallbladder, pancreatitis, or ascending cholangitis due to common duct stones. The physician should feel that repeated medication for the relief of the pain is a strong indication for exploration.

An outstanding part of her picture on the day following admission was her rapidly increasing apparent toxicity and the appearance of signs of shock. One of the most common causes for the picture of shock is peritonitis. The peritonitis may



be of the so-called chemical variety, such as appears after a perforated ulcer or in acute pancreatitis. Infectious peritonitis produces the same picture of shock. We strongly considered a peritonitis in our differential diagnosis. She had a distended abdomen which was always silent to repeated auscultations. It is true that the usual abdominal rigidity was not found, and, likewise, rebound tenderness was not demonstrable, but these cardinal findings of peritonitis may be minimal in the desperately ill patient. Because we were unable to percuss liver dullness we strongly suspected a perforated viscus, either a peptic ulcer or a perforated gallbladder.

A perforation of the gallbladder into the free peritoneal cavity is a rarity. This patient could have developed a localized perforation early in the last attack; as the abscess increased in size, a secondary perforation into the general peritoneal cavity could have occurred in the night on the date of her admission.

Acute pancreatitis is of two major types, the idiopathic variety and that secondary to biliary tract disease, particularly common duct stone. Some of the classical findings of acute pancreatitis were not present in this patient. She had no flushing of her cheeks and she had no pain or tenderness in the left costo-vertebral angle. The past week of her illness was unusually severe, an important feature being the severe nausea and vomiting. The nausea and vomiting of acute pancreatitis is likely to suggest the diagnosis of small bowel obstruction.

In our experience in the patients explored and found to have pancreatitis, the preoperative diagnosis was intestinal obstruction in 60 per cent of the cases. With her story so suggestive of gallbladder disease, her increasing signs of shock and toxicity, the silent abdomen, the repeated episodes of nausea and vomiting, and a knowledge that the bowels moved daily, we seriously considered the diagnosis of acute pancreatitis, secondary to common duct stones.

Since conservative measures and efforts to correct her dehydration had failed to improve her condition we felt exploration was indicated even though she was rapidly approaching the moribund state.

### Summary of Necropsy Findings

The primary lesion in this case was chronic cholecystitis with cholelithiasis. A large stone, which measured 2.5 by 1.4 by 1.4 cm., had eroded through the gallbladder wall initiating a pericholecystic abscess. Further erosion, doubtless expedited by the abscess, had produced an opening into the superior wall of the first portion of the

duodenum. Thus, a cholecystoduodenal fistula was formed and the gallstone had traversed the lumen of the small bowel to a point 60 cm. proximal to the ileocecal valve where it had lodged. A healing surgical incision was present in the small bowel in this region where the stone had been removed at operation. Several smaller stones were found in the lumen of the upper ileum. One of these was so large that it could not be passed through the lumen at the point where the bowel had been opened. The intestinal wall was edematous at this point. The jejunum and ileum above this region were dilated and distended with gas and fluid. Below this point the bowel was relatively collapsed.

Remnants of the gallbladder were found in the wall of the abscess cavity. The wall of the gallbladder was thickened, scarred, and contained many chronic inflammatory cells. The muscle layers were hypertrophied. The cystic duct was almost obliterated by scar and granulation tissue. The hepatic ducts and the common duct were normal in size and unobstructed.

Dense fibrous adhesions had walled off the abscess from the general peritoneal cavity. The stomach, the liver hilum, the transverse colon, and the greater omentum all were involved in these adhesions.

### Other Findings

Acute lobular pneumonia had involved the lower lobes of both lungs. There was 150 cc. of fluid in the left pleural cavity and 200 cc. in the peritoneal cavity. Numerous small infarcts were present in each lung, but no source of the emboli was found at autopsy.

The arteries showed moderate atherosclerotic changes. In the aorta several of these plaques had ulcerated. There were leiomyomata in the uterine wall. A small neurofibroma had developed in the submucosa of the stomach. This had produced a small polyp covered by mucosa and submucosa but it had not invaded the surrounding tissue.

### Necropsy Diagnosis

Chronic cholecystitis with cholelithiasis; pericholecystic abscess with cholecystoduodenal fistula; enterolithotomy (cholelith) post operation; acute dilatation of the stomach and partial obstruction of lower ileum; ascites; lobular pneumonia; hydrothorax, left; multiple pulmonary infarcts; atherosclerosis, generalized; atherosclerotic ulcers, aorta; polypoid neurofibroma, gastric; leiomyomata of uterus; chronic passive congestion of abdominal viscera; fatty metamorphosis of liver, mild.

(Continued on page 493)

# STATE DEPARTMENT OF HEALTH



## BOTULISM IN IOWA AND UNITED STATES

A fatal case of botulism, the first in an Iowa resident to be notified to the State Department of Health, in recent years, was reported Sept. 24, 1946, by Ralph Lovelady, M.D., of Sidney, Fremont County coroner. The following account is based on information furnished by Dr. Lovelady by the attending physician, H. R. Cole, M.D., of Thurman and by the parents of the deceased child.

*Fatal Case in Fremont County:* During the summer of 1945, Mr. and Mrs. A. who live on a farm near Bartlett in Fremont County, canned vegetables, including fifty two-quart jars of corn. A new pressure cooker had been used for the first time, contents having been heated for ninety minutes at a pressure of twenty pounds.

Recently, toward evening of September 21, Mrs. A. observed that the jars of corn didn't look good. On removing a lid, she detected a sour, rancid odor. She called an older son and had him take the jar into the back yard; the spoiled contents were poured on the ground. A baby girl of 14 months who had followed along was seen to have "a few kernels of corn on the front of her dress and her hands covered with sour corn and juice."

The child ate supper and slept well in the night but was sick the next morning. Her eyes "wavered a little and wouldn't focus"; she was conscious but appeared weak and had difficulty in swallowing. She was rushed to the office of the attending physician. Examination revealed a slightly increased pulse rate. Vomiting, diarrhea, and fever were all absent; there was slight nuchal rigidity. The child seemed bright and mentally alert. Several hours later, however, she became "very limp, couldn't use her arms and legs to any degree, and died shortly before noon of the same day."

*Fatalities among Non-residents in Woodbury County:* On Aug. 1, 1946, two cases of botulism were reported to the State Department of Health by Robert N. Larimer, M.D., of Sioux City. The patients, two middle aged, unmarried male residents of South Dakota, were seen by Harper Kerr,

M.D., of Akron and rushed by ambulance to a Sioux City hospital. The patients had eaten home canned beets. Illness was sudden, characterized by extreme nausea, vomiting, diarrhea, dehydration, cloudy sensorium, staggering gait, difficulty in swallowing and extreme thirst. One patient lived twenty-three hours, the other thirty-six hours following the acute onset.

*Botulism in the United States:* Data pertaining to Botulism in the United States and Canada for the period 1899 to 1943 were assembled in 1944 by Karl F. Meyer, M.D., of the George Williams Hooper Foundation, University of California, San Francisco. Outbreaks totalled 404; cases, 1,125; and deaths, 732, a case fatality of 65 per cent.

Of the total of 404 outbreaks, only one (5 cases with 3 deaths) was notified from Iowa and that twenty-seven years ago, in 1919. Smoked ham (home processed) was found to be the vehicle of infection.

*Preventive Measures:* Symptoms of botulism are due to a potent toxin produced by the causative organism, *Clostridium botulinum*. To insure complete destruction of this pathogen (which may contaminate string beans, corn, spinach, beets, asparagus, olives, peppers, peas, tomatoes, other vegetables and meats), it is essential that jars or cans be small (not larger than quart size) so that heat will readily penetrate to the center. Botulinus toxin is rendered harmless when canned vegetables and foods are boiled with frequent stirring for ten to fifteen minutes. When home packed vegetables show spoilage as evidenced by gas, sour or rancid odor, they should be discarded after boiling and the jars sterilized in lye water before using again.

## PREVENTION OF INFLUENZA THROUGH VACCINATION

During recent years a vaccine for active immunization against influenza has been developed by: (1) cultivation of viruses of influenza, Types A and B, in the allantoic fluid of chick embryos; (2) concentration and refinement of the virus



material following inactivation with formalin. The Commission on Influenza of the Board for the Investigation and Control of Influenza and other Epidemic Diseases of the Preventive Medicine Service of the U. S. Army, with Thomas Francis, M.D., as chairman, has had opportunity to use the vaccine on several large groups of individuals and to demonstrate its value in preventing influenza among those immunized. Francis and associates reported studies in a series of articles published in the *American Journal of Hygiene*,<sup>1</sup> "Influenza Among Vaccinated and Untreated Persons in Michigan."

Francis, Salk and Brace<sup>2</sup> recently reported results of work carried out at the University of Michigan. On Oct. 16, 1945, army personnel numbering 600 were immunized "with combined, concentrated influenza A and B vaccine prepared from infected allantoic fluid." Eleven hundred individuals in a nearby service unit were not vaccinated. "The two services were housed in university dormitories; the army group was divided in three dormitories; the other service unit occupied one large dormitory."

On Nov. 7, 1945, first cases of influenza were observed at the Student Health Service. The virus of influenza (Type B) was isolated from throat washings of several patients. "In the eight weeks from October 28 to December 22 inclusive there were 109 admissions for acute respiratory disease from the unvaccinated unit of 1,100 men—a rate for this period of 99.1 per thousand; while from

the 600 men in the army unit there were but 7 admissions—a rate of 11.5 per thousand men."

REFERENCES

1. Francis, et al: A series of seven papers for the Commission on Influenza covering the entire issue of the *Amer. J. of Hygiene*, xlii:1 (July) 1945.

2. Francis, Thomas, Jr.; Salk, Jonas E.; and Brace, William M.: Protective effect of vaccination against epidemic influenza B, *J.A.M.A.*, cxxxi:275-278 (May 25) 1946.

INFLUENZA VACCINE AVAILABLE

Physicians who desire to use influenza vaccine for active immunization of individuals, families, or groups, and who are unable to procure the same locally, may obtain this vaccine from the State Department of Health.

CLINICOPATHOLOGIC CONFERENCE

(Continued from page 491)

Comment

*Dr. J. W. Dulin:* Preoperatively, the diagnosis of intestinal obstruction due to a gallstone should have been considered. The final illness at onset was similar to previous attacks. The flat film of the abdomen may prove the diagnosis in certain cases. This case demonstrates the importance of looking for multiple stones in the bowel at the time of the operation.

MORBIDITY REPORT

Diseases	Sept. '46	Aug. '46	Sept. '45	Most Cases Reported From
Diphtheria .....	8	26	5	Fremont, Black Hawk and Des Moines
Scarlet Fever .....	53	33	72	Scott, Dubuque and Linn
Typhoid Fever .....	3	3	4	Buena Vista, Des Moines and Jackson
Smallpox .....	0	0	0	.....
Measles .....	26	58	5	Dubuque, Greene and Black Hawk
Whooping Cough .....	89	169	19	Dubuque, Boone and Clinton
Brucellosis .....	9	44	16	Marshall, Polk and Butler
Chickenpox .....	17	26	23	Delaware, Scott and Des Moines
German Measles .....	0	3	4	.....
Influenza .....	0	0	0	.....
Malaria .....	8	21	29	Polk, Dubuque and Greene
Meningococcus Meningitis .....	5	6	4	Black Hawk, Boone and Polk
Mumps .....	18	49	33	Delaware, Black Hawk and Cerro Gordo
Pneumonia .....	*485	*1608	7	Polk, Linn and Woodbury
Poliomyelitis .....	132	204	92	Polk, Sioux and Tama
Tuberculosis .....	95	65	73	For the state
Gonorrhea .....	180	184	232	For the state
Syphilis .....	138	158	133	For the state

\*Delayed reports from Iowa Hospitals covering first 26 weeks of 1946.

# The JOURNAL of the Iowa State Medical Society

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## Type A Influenza

The year 1946 completes the cycle when another Type A Influenza epidemic has been predicted. The use of influenza vaccine, which is a killed chick embryo virus, has been proved of value, particularly in the armed services. This vaccine is now available commercially through several companies, among them being Lederle, Eli Lilly, Squibb, Pitman-Moore and Parke, Davis.

Lederle and Eli Lilly Companies make the "Army Type" vaccine, the former also producing a vaccine in which the virus is separated by centrifugalization as compared with the red blood cell absorption method. Eli Lilly has one which is formalin killed; Squibb puts out a centrifugalized vaccine; and Parke, Davis has available a vaccine in which the virus is absorbed with calcium phosphate. Prices vary from \$4.50 to \$15 per 10 cc.

Available statistics indicate favorable results from its use. The first trial of the vaccine was made against Type A Influenza in the epidemic of 1943 by the Commission on Influenza of the United States Army. Vaccinated soldiers averaged one-fourth as many cases as the unvaccinated. Of ten million servicemen vaccinated for Type B Influenza in 1945, no serious reactions occurred and a marked beneficial effect was demonstrated. In December, 1945, when the influenza vaccine was first put on the market, several large industrial organizations offered it to employees. The American Cyanamid Company gave the vaccine to 6,238 individuals, 90 per cent of whom experi-

enced no unpleasant reaction. Of the remainder, 8.5 per cent complained of some soreness of the arm or slight achiness or chilliness for a few hours, and only 1.4 per cent reported reactions severe enough to warrant absence, none of which lasted more than forty-eight hours.

The vaccine was given by the Army in one injection. The American Cyanamid Company, in order to lower the incidence of reactions, gave the same amount of vaccine in divided injections a week apart. Improvements have been made in the vaccine in the past several months, however, and a dose of 1 cc. of the refined product can be given in one injection with a minimal risk of reaction. Immunity following vaccination rises to a peak in two to six weeks after the injection and gradually decreases. The evidence indicates that some increased immunity still remains a year later.

This year many large industrial organizations throughout the country have taken the necessary steps to give the vaccine to all employees, while smaller companies and individual patients have made arrangements with their own physicians to obtain the same protection. Caution should be observed, however, when administering the vaccine to patients with a history of allergy, especially to those sensitive to chicken protein, egg, or dander. The attention of physicians of Iowa is directed to the feasibility of this medication.

## Hospital Construction in Iowa

With the signature of President Truman the Hospital Survey and Construction Act became Public Law No. 725 in the Seventy-ninth Congress. The new law authorizes an appropriation of \$3,000,000 for state conducted surveys of need and \$75,000,000 annually for a five year period for construction of hospitals and related facilities. The recent Congress made available only \$2,350,000, earmarked for assistance to states in surveying and planning and for administrative expenses of the United States Public Health Service in connection with the program.

Of this amount Iowa is entitled to \$51,182 for the five year period. Under the law, the federal grant cannot exceed one-third of the total State Survey and planning cost. A State Hospital Survey Committee, previously appointed by Governor Blue, has completed a general survey and inventory of existing hospital facilities in Iowa and will continue as an Advisory Council to further extend the survey and determine the future hospital needs in the State. Hospital facilities will comprise public and non-profit hospitals (including provision for tuberculosis, mental and chronic



disease patients), public health and medical service centers and laboratories.

The Iowa plan must show the needs for additional hospital facilities to be constructed, listed in order of urgency, and provide methods for administering the plan as well as the regulations for sanitation and construction required by the Act. The Iowa plan must be approved by the Surgeon General, United States Public Health Service, and the National Hospital Advisory Council. Certain legislation required by the Act is being studied for consideration by the next General Assembly.

No money has yet been appropriated for construction. On the basis of the \$75,000,000 authorization, Iowa will be entitled to an allotment of \$1,341,750 (preliminary estimate) for construction during the fiscal year ending June 30, 1947, if its plan is approved before that date. Application forms for individual construction projects in Iowa will be made available for distribution by the State Department of Health when funds are appropriated for construction by Congress. The applications must be approved first by the State Department of Health and its Advisory Council and then by the Surgeon General, United States Public Health Service.

Before the applications are finally approved, reasonable assurance must be given that the project conforms to the state plans, however. Two-thirds of the construction costs are available from non-Federal funds whereas adequate financial support will be provided for maintenance and operation after construction is completed. The application must further set forth: (1) a description of the site and reasonable assurance that the title to the same is vested solely in the applicant; (2) reasonable assurance that the rate of pay for laborers and mechanics employed in its construction be not less than the prevailing rate as described in Public Law 403; and (3) assurance that no discrimination as to race, creed or color be shown in the provision of facilities and that those unable to pay be provided for.

Construction includes expansion, remodeling and alteration of existing buildings. On approved projects a grant of an amount equal to one-third the estimated cost of construction will be certified by the Surgeon General to the State Department of Health.

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### The Speakers Bureau

In 1929 the Iowa State Medical Society created a Speakers Bureau designed to educate not only the medical profession but also the laity. Through the years the Bureau has been instrumental in

arranging many excellent programs for county medical societies, postgraduate courses, radio broadcasts, and lay organizations such as service clubs, parent-teacher associations, and women's clubs. Outstanding speakers have been brought to Iowa in connection with postgraduate courses, and public relations have improved because of meetings with lay groups. Weekly broadcasts from radio stations WOI, Ames, and WSUI, Iowa City, on medical subjects have been a function of this Bureau.

More important than all of these activities, however, is the fact that the Bureau has helped our own members keep abreast of the developments in medicine. When a physician is requested to prepare a paper or address a group, he is impelled to carry on some research work so that he may present new, authentic facts to his listeners; he is eager to evaluate what others have done before him; and he is stimulated to seek new therapeutic methods.

With the active participation of every member in Iowa, the Speakers Bureau can again resume its normal functions. This spring we believe a postgraduate course should be presented in every section of the state, but arrangements for these programs should begin this fall. Write the central office for information and assistance with your meetings. Renewed interest in our Bureau will reflect favorably on the profession, not only from the standpoint of improved public relations but also from the standpoint of better medicine.

With the return of physicians from the armed services, there is now available a selection of unusually qualified speakers who can discuss any phase of medicine. Individual physicians and county secretaries are invited to discuss their problems or desires directly with the Speakers Bureau.

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### Basic Principles of Inguinal Hernioplasty

Not only is the surgical literature on inguinal herniae voluminous, but a surgeon doing an occasional hernioplasty often believes his recurrence rate is low because he places a given suture with a particular "twist of the wrist." That recurrences do occur for all surgeons doing hernioplasties, there is no doubt.

The recurrence rate should be kept below 7 per cent and preferably below 3 per cent. The percentage of recurrences is difficult to determine unless all patients are personally followed over a period of years. The patient may not know that he has a recurrence, or he may fail to return to the same surgeon since he believes that having given that surgeon a trial, why should he return

for a second attempt. Most recurrences occur within the first year. Often the patient reports that he believes it recurred before leaving the hospital. The most important single factor in the final result is the condition of the structures at the time of operation. The method of repair should vary depending upon the "goods on hand."

A complete knowledge of the anatomical details of the region is necessary. Recently there have appeared reports of careful dissections of the inguinal region with newer concepts of old anatomical studies. The fundamental concepts of these studies were described and considered in the treatment of herniae by surgeons of the past generation. Often they hastily pass over the basic details so necessary in the understanding of a hernia repair.

The incision should be made about one inch above and parallel to Poupart's ligament, being of such a length that adequate exposure is possible. The size of the patient is the important factor in determining the length of the incision. The incision does not vary because there is strangulation or incarceration. Proper exposure and dissection of all layers with identification of all structures are important. Sharp dissection and the kindly handling of tissues leads to a minimum of tissue reaction and to better healing. Wide, blunt dissection, forceful tearing of tissues, unnecessary handling of structures, and the application of many powerful clamps must all be avoided. Respect should be given to the sphincteric action of the internal ring. The ring should not be divulsed or torn by retraction. Its nerve supply must be respected. Structures placed above or lateral to the internal ring may involve the nerve supply to the muscle fibers in the region of the ring and be responsible for their subsequent atrophy. Recurrences are greater when the deep epigastric vessels are divided and ligated. When these vessels are not injured, they essentially retain their normal location, regardless of recurrences.

Adequate hemostasis is important. Particular attention is necessary to the smallest bleeders along the cord structures. When improperly controlled, this predisposes to tension in the wound, pressure on the remaining patent cord vessels, swelling, and hematoma.

The only common factor in all the various types of repair is a careful high dissection and a high closure of the sac. The sac must be freed of all extraperitoneal fat and securely closed at a level which removes all the original hernia bulge. After excision of the sac, the closed neck should retract high behind the internal oblique and transversalis muscles. Free bleeding must be controlled from

the vessels in the edge of the closed sac. Some sacs may best be closed by trimming them off as high as possible and closing them from within with a running suture. The saddle variety should be converted into an indirect variety whenever possible.

A direct hernia is more difficult to treat than an indirect. Usually the sac should be opened and the redundant peritoneum eliminated. The transversalis fascia and the floor of the canal should be inverted by one or more rows of sutures. It is in this group where fascia transplants are most often indicated.

Before closure of the sac, it may be necessary to free the bladder or intraperitoneal attachments of intestines or omenta. Hesselbach's triangle should be explored with the finger from the inside to make sure that there is not a peritoneal pocket in this region. To leave such a pouch means almost certain recurrence. One should palpate for a possible femoral hernia. The appendix may be removed if so desired. An appendectomy at the time of a hernia repair increases the incidence of postoperative complications, including mortality.

The surgeon should be familiar with the basic principles and details of several types of repair. He should know the advantages, disadvantages, indications, and contra-indications of each. The Coley-Ferguson procedure should be reserved principally for children. Only occasionally is it indicated in the adult female and rarely in the male. He should realize that the Bassini technic is a tried and proved method and indicated in the majority of instances. The Halsted method or a modification of it is indicated in certain direct, recurrent, or difficult herniae. In this method the subcutaneous transplantation of the cord midway along the course of the old canal allows for the support of the internal ring by the aponeurosis of the external oblique, as well as reinforcement of the lower end of the canal floor. Such a procedure is a modification of the original Halsted operation. The surgeon should be capable of utilizing fascial transplants.

The type of suture material used is perhaps not too important. Certainly a catgut surgeon will prefer catgut and will see no advantage to silk, cotton, or wire. Fine suture and one which produces minimum tissue reaction leads to better wound healing. All layers must be sutured without tension. Otherwise the sutures either cut through if they are fine or cause pressure necrosis if they are large and tied tightly. In either event the purpose of the suture, namely the approximation of tissues until healing has occurred, is defeated.



# VETERANS ADMINISTRATION

## The Relation of the Veterans Administration Hospital to the Community

The present Veterans Administration, with its 17,500,000 beneficiaries of World War I and World War II, is now destined to play an important rôle in the progress of its own hospital territory. The hospital territory can readily be construed to be the community of the respective hospital; for example, the entire state of Iowa with but slight exceptions can be considered the community of the Veterans Administration Center, Des Moines.

The veteran population of Iowa is approximately 315,000 men and women, many of whom may be called upon to participate in civic functions and offices bearing the burden of future state progress. From the medical viewpoint these veterans are potential beneficiaries of the Veterans Administration. Upon the Veterans Administration rests the direct responsibility of insuring them medical care second to none and indirectly insuring the state of citizens capable of working in the interests of their fellow men.

Digressing for a moment, it is to be emphasized at this time that hospitalization of veterans in their local community is permissible only for those with service-connected disabilities and for emergency treatment only of the service-connected disability. Female veterans may be hospitalized locally if emergency approval is obtained from the Veterans Administration installation supervising that territory. Nonservice-connected veterans, emergency or otherwise, cannot be treated in the local hospital.

The Veterans Administration at the present time is expanding at a terrific pace to meet the veteran load which confronts it. Since 1945 numerous Army and Navy hospitals have been taken over by the Veterans Administration, and at present the construction program has been accentuated to provide for approximately 150,000 beds by 1948. Increased construction in Iowa

will include a 500-bed hospital at Iowa City. The hospital will be supervised by the Dean's Committee, insuring properly trained physicians and the best medical care to the veteran.

It is quite safe to say that the Veterans Administration hospital, with its tremendous patient load, variety of cases and medical problems which now come under its jurisdiction, will also aid its respective community by affording adequate case studies in various disease entities which are not readily available for the general practitioner.

From the medical viewpoint, and including other veterans' benefits, it can be seen that the Veterans Administration, a governmental agency, plays a great rôle in the progress of its future community. The physicians of the community and state should always bear in mind that the Veterans Administration is interested not only in those beneficiaries under its own jurisdiction but also in affording opportunities for medical progress and in assisting the physicians in every possible way in the advancement of medical science. The program of the Veterans Administration calls for the greatest cooperation with the state physicians insofar as their medical problems are concerned.

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## SCIENTIFIC EXHIBIT

### Centennial Session—American Medical Association

At the centennial session of the American Medical Association to be held in Atlantic City, June 9 to 13, 1947, the Scientific Exhibit will include both the history of medicine during the past century and the latest developments of medical science.

Application blanks for space are now available. All applicants must fill out the regular form. Applications close on January 13, 1947, after which time the Committee on Scientific Exhibit will make its decision and notify the applicants.

Application blanks for space should be procured as soon as possible. They are available from The Director, Scientific Exhibit, American Medical Association, 535 North Dearborn Street, Chicago 10, Illinois.

# WOMAN'S AUXILIARY NEWS

MRS. KEITH M. CHAPLER, *Chairman of Press and Publicity Committee*, Dexter, Iowa

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*President-Elect*—MRS. FRED MOORE, Des Moines

*Secretary*—MRS. CHARLES A. NICOLL, Pannora

*Treasurer*—MRS. HENRY G. DECKER, 2908 Woodland, Des Moines

## PROGRAM SUGGESTION

We recommend that county program chairmen write to Mrs. L. C. Nelson, Jefferson, state chairman, for assistance in program planning.

## NOTES FROM A NATIONAL AUXILIARY LEAFLET

"The busy wife is an asset to the Auxiliary, if she is an informed member, because she has many opportunities to carry the aims and decisions of the medical profession and keep health leadership where it belongs with the profession. As a member, she may speak with authority and receive respect and attention that will be missing as an unattached doctor's wife. It is not necessary to partake of every phase of Auxiliary work to be a good member, only what one can do. She should know when to keep quiet, when to report to advisors; when to answer and what to say.

"If for no reason but to assemble regularly and study the history of the medical arts and medical heroes, an Auxiliary would be worthwhile, because it would give wives an understanding of the supreme unselfishness and the greatness of the profession.

"The time has come when the Auxiliary has so proved its worth that the question is not, 'Are you an Auxiliary member?' but, 'Why are you not a member?'"

## IOWA MEDICAL SERVICE

Approximately 13,000 people are now covered by Iowa Medical Service. Better than 6,000 of these people live in Polk County and obtain their hospital and medical care locally. Groups are being enrolled as rapidly as representatives of the plan can make contacts and arrangements. Most groups are subscribing to both surgical and medical care.

One hundred twenty Polk County doctors are now participating. Over \$8,000 has been paid out in claims. The nine months waiting period on tonsillectomies and maternity care has elapsed on the earlier contracts, and claims for these services have been anticipated and reserves established.

All certificates issued include the provision that subscribers whose family income is not in excess of

\$2,500 a year (net), or whose individual income, if a single person, is not in excess of \$1,500 a year shall receive full service benefits (no additional charges) if professional services provided for by the contract are rendered by participating physicians. If incomes exceed these amounts the participating physician may make an additional charge, and that provision is clearly set out in the certificate. That is, for people of lower income the certificates are for full service; for people with incomes above the designated level the benefits are paid directly to the physician as an indemnity. The indemnity provision is similar to that of the usual commercial contract except that Iowa Medical Service pays directly to the participating physician.

There is some criticism of the schedule of benefits now in effect under IMS. A first consideration is that these fees are for people of lower income, many of whom experience has shown would have paid only a portion of the schedule or none at all. Some have been referred out of Broadlawns General Hospital when it was found that they carried IMS and beds were available in private hospitals. If the profession accepts the obligation to provide medical care to the people, vehicles such as this prepaid medical care plan will assure a much more even income in good times and bad. The long view should assure quite adequate professional incomes and adequate medical care of the people by physicians in private practice.

The schedule of fees has not been published for the reason that it is not complete as to items of service and tentative as to fees. The schedule was referred to the Medical Advisory Committee for review at the annual meeting. In allowing claims a definite effort has been made to adjust inequities in so far as possible.

More and more people will be coming to physicians who have sought to provide payment to the physician through enrollment in IMS. The Doctors Service Report, a supply of which has been delivered to every participating physician, should carry the group number and certificate number of the subscriber. This information is available from the Identification Card which every subscriber should present when asking for professional care. Reports should be made as promptly as possible for confirmation of the patients' eligibility for benefits and to expedite early payment of claims.—*Polk County Medical Bulletin.*



## EDUCATION IN HEALTH AND HEALTH IN EDUCATION

Again *Hygeia* calls attention to an analysis of the principal causes for rejection of registrants under Selective Service because of their placement in one of the "F" classifications; these men were rejected for deficiencies in health, education or intelligence. About 5,000,000 men were rejected for such causes. A large number were discharged from the Armed Forces following acceptance because they were found unfit to serve advantageously. According to Col. Leonard G. Rowntree, medical director of the Selective Service System, more than 1,500,000 men have been rehabilitated within the military services. Even among those accepted, extended physical training has been necessary to make men fit for military service. Colonel Rowntree believes that the conditions thus demonstrated represent failures of our society in education in the home, in the school and in industry.

More than 1,500,000 men were disqualified because of illiteracy, defects of the nervous system or mental disease. More than 40 per cent of men released from the service were released because of neuropsychiatric classifications. This means that almost 2,000,000 men can be put in the nervous and mental classification. Much of neuropsychiatric breakdown is a failure of suitable mental hygiene. Mental hygiene means education in sound practices of thinking, in sound attitudes, in the cultivation of equanimity and relaxation. Modern medicine emphasizes particularly diseases said to be of "psychosomatic" origin—physical conditions definitely associated with mental disturbance. Ulcers of the stomach and duodenum, some cases of asthma, and many cases of so-called nervous breakdown can be overcome by psychosomatic investigation and treatment.

The Joint Committee on Physical Fitness of the American Medical Association and of the National Committee on Physical Fitness has been giving special consideration toward the establishment of a nationwide program for achieving mental and moral health and soundness of body, mind and spirit. We need integration of mental and physical health in the school curriculum. We need the same kind of organized teaching of health that we have developed for the teaching of mathematics, English composition, history and languages. We need adequate credit given for physical fitness and health education. The granting of a diploma at any educational level should include successful progress in these subjects. Moreover, there must be integrated in the schools, through suitable use of school physicians and school nurses, the necessary examinations and the establishment of standards to be met by the growing child. A minimum program would include:

1. A pre-admission physical examination at the age of 5 years.
2. Periodic examinations at regular intervals thereafter.
3. Education in principles of healthful living.
4. One hour daily for physical training.
5. Credits for satisfactory progress.

6. Cumulative health and physical fitness records.
7. Provision of adequate personnel, facilities and time for this program.

John W. Studebaker, United States Commissioner of Education, is in full accord with these objectives, as are school officials in most of our progressive states. They have endorsed this program. It remains for responsible state and county political officials and for school authorities throughout the nation to realize and accept their part in securing for the boys and girls of our country the utmost that can be attained by each of them in physical and mental health.—*Hygeia*, March, 1945.

## HOW HYGEIA AIDS THE MEDICAL PROFESSION AND WHY IT BELONGS IN THE WAITING ROOM

**Question:** Does *Hygeia*, by its very nature, encourage self medication?

**Answer:** No. The majority of the laity letters on file in the circulation department of *Hygeia* say in effect, "When I get through reading an article in your publication, it all boils down to this—'See your doctor!'" An analysis will show that the editorial policy stresses preventive action and periodic examinations.

**Question:** Does *Hygeia* frighten readers into believing they have disease?

**Answer:** There will always be a few people who immediately discover personal symptoms whenever they read about the various diseases. This cannot be helped; it may be for the best if these persons experience real or imaginary ailments which a checkup with their family physician will help to eliminate.

**Question:** Does *Hygeia* cause the patient to question the doctor's method of treatment?

**Answer:** It is agreed that many times nothing can be more annoying to the medical man than attempted "diagnosis" by the layman. But if the patient is going to form an opinion, he is exposed to countless sources of available "health information" considerably less reliable than *Hygeia*. The articles published in The Health Magazine of the American Medical Association give authentic information that will help to promote intelligent cooperation on the part of the patient.

**Question:** Is *Hygeia* too high in price?

**Answer:** Most doctors agree with all serious readers of *Hygeia* that the authoritative health information it contains is worth many times the subscription price of \$2.50 a year. This rate is comparable with other quality magazines.

**Question:** Is it "unprofessional" for the physician's wife to promote *Hygeia*?

**Answer:** It is a woman's privilege and opportunity to cooperate with her physician husband in the furtherance of health education through the Woman's Auxiliary. Members are not actually "magazine saleswomen" as there is no profit motive in a sale of *Hygeia*. It is a distinct form of public welfare service and the medical profession, as a group, is proud that the doctor's wife recognizes the importance of general health enlightenment.—*Hygeia Handbook*, 1945-46.

# HISTORY OF MEDICINE IN IOWA

*Edited by the Historical Committee*

DR. WALTER L. BIERRING, Des Moines, Chairman

DR., HENRY G. LANGWORTHY, Dubuque, *Secretary*

DR. CLYDE A. HENRY, Farson

DR. CHARLES L. JONES, Gilmore City

DR. LESTER C. KERN, Waverly

## Medical History of Dickinson County

FERDINAND J. SMITH, M.D., Milford

(Conclusion)

### PART III

Long before the white settlers came to settle Dickinson County, the rich lake region had been a rendezvous of the Dakota tribes which included the powerful Sioux, Omaha, Iowa, and Yankton. The most beautiful of the many lakes of the region was called Spirit Water by the Indians but is now known as Spirit Lake. The county is the most elevated one in the state and a natural great watershed for the territory. Continuing further with the physicians connected with and practicing in the county, we find the following:

#### DR. C. G. NICHOLSON

Dr. C. G. Nicholson was born Sept. 27, 1896, at Grand Island, Neb., to Mr. and Mrs. John Nicholson. He attended grade school in Omaha, Neb. He entered the University of Nebraska School of Arts and Sciences, finally completing his work in the Department of Medicine from which he was graduated on June 10, 1925. He served in the armed forces of the United States in 1918 and 1919. At present he is a Captain in the Medical Corps of the United States Army, having enlisted on Oct. 26, 1942.

Dr. Nicholson was surgeon for the Chicago, Rock Island, and Pacific Railroad and insurance examiner for the New York Life Insurance Co., Pennsylvania Mutual, New York Mutual, Massachusetts Mutual, Travelers Life Insurance Co., and others.

#### DR. RUTH F. WOLCOTT

Dr. Ruth F. Wolcott was born Oct. 26, 1898, to the Rev. and Mrs. William A. Wolcott, Rev. Wolcott being a Methodist minister, at Ackley, Iowa. She attended high school in Spencer, Iowa, and received her A.B. degree in 1918 from the University of Iowa where she majored in mathematics. Her medical education was also received at the University of Iowa, and she was given her M.D.

in 1925, being licensed to practice medicine in Iowa in 1928. Dr. Wolcott interned at the Department of Internal Medicine, University of Iowa, in 1925-1926; Women's Hospital, Detroit, Mich., 1926-1927; Evanston General Hospital, Chicago, Ill., in 1926; and Memorial Hospital, Philadelphia, Pa., in 1931-1932. She spent four years in Foochow, China, as superintendent of the Foochow Union Hospital and head of the Department of Gynecology. Dr. Wolcott has practiced medicine in Spirit Lake since 1932.

She was married in 1940 to O. W. Fischer of Spirit Lake. Dr. Wolcott is examiner for the Degree of Honor Life Insurance Company. Since 1935 she has been secretary of the Dickinson County Medical Society. She was elected to Phi Beta Kappa in 1918; election to the honorary medical fraternity, Alpha Omega Alpha, followed in 1924, and to the honorary medical fraternity, Sigma Xi, in 1925. During her college days Dr. Wolcott was a member of the medical sorority, Nu Sigma Phi.

She is active in the following organizations in Spirit Lake: P.E.O., Eastern Star, Rebecca Lodge, Business and Professional Women's Club. She is also a member of the Methodist Church.

#### DR. DONALD RODAWIG

Dr. Rodawig was born Feb. 10, 1905, at Saybrook, Ill. He was graduated from grade and high schools in Rockwell City, Iowa, and attended Morningside College in 1923-1924. He entered the University of Iowa in 1924, receiving his B.S. and M.D. degrees in 1930. His internship was passed at the Henry Ford Hospital, Detroit, Mich., and he obtained a surgical residency in Lucas County Hospital, Toledo, Ohio, in 1931. He settled in Dickinson County in 1932. Dr. Rodawig did postgraduate work in surgery at Vienna, Austria, in October, 1938.



He married Mary Elizabeth Ellis. They have four children: Donald, Jr., 17; William Ellis, 12; Susan, 11; and Sandra Ann, 8.

He is examiner for the Equitable Life Insurance Company of Iowa and the North West Mutual Insurance Company. Dr. Rodawig is now serving as a Major in the Medical Corps of the United States Army in North Africa.

#### DR. THOMAS L. WARD

Dr. Thomas Ward was born in Union City, Mich., Dec. 16, 1896, to Albert E. and Minnie I. Ward. He finished high school at Marshalltown, Iowa, in 1916, and attended Grinnell College in 1917-1918. He then studied medicine at the University of Iowa Medical Department, receiving his B.S. degree in 1924 and his M.D. in 1926. During his last year in school he was resident at the State Tuberculosis Sanatorium, Oakdale, Iowa. He interned at the Lutheran Hospital in Des Moines.

During World War I he enlisted in the Navy Medical Corps. He was stationed at the Metropolitan Hospital in New York City before being sent to the University of Minnesota Medical College for special training, thence to the Brooklyn Naval Hospital.

He was married to Miss Wilma Grassfield in 1924; they have two children, Thomas, 16, and Patricia Ann, 7. Dr. Ward is in general practice and also fits glasses. He is examiner for the New York Life Insurance Co., Equitable of New York, and Equitable of Iowa.

In the fall of 1927 he suffered an attack of rheumatoid arthritis which rendered him bedfast and forced him to abandon his practice. The following autumn he had a sympathectomy of the lumbar ganglion. This afforded no relief, however. In the spring of 1935 Dr. Ward came to Arnolds Park where he began to see patients again while seated in a wheel chair. He has gradually improved and has been able to carry on a fairly active general practice.

#### DR. F. L. R. ROBERTS

Dr. F. L. R. Roberts was born in Jackson, Minn., July 19, 1893, to Alfred C. Roberts and Alma Bowen Roberts. In 1913 he was graduated from Jackson High School and in 1918 from the Des Moines Still College of Osteopathy. Dr. Roberts had one year as a premedic at Iowa State College, Ames, Iowa, and finished his premedical training and medical training at the State University of Iowa in 1935.

Before entering the practice of medicine he was a telephone lineman and telephone operator. His

high school work was interspersed with two years of country school teaching. He practiced osteopathy for eleven years; interned at Lincoln General Hospital, Lincoln, Neb., and was an assistant to W. C. Bartlett, M.D., Alma, Neb. In 1914 he was married to Mary E. Price, Ph.D., of Spirit Lake, Iowa.

Dr. Roberts is surgeon for the C., R. I & P. Railroad. He is particularly interested in life insurance examinations and has been appointed examiner for many companies.

Dr. Roberts has varied outside interests. He is past president of the Iowa Ornithologists' Union, as well as former editor of the *Bulletin* of the Iowa Ornithologists' Union. He is also the author of many magazine notes and articles on ornithology, being frequently cited in bibliographies on ornithology as an authority on Iowa birds. He is president of the Alumni Board of the Lakeside Laboratory of the State University of Iowa. His hobbies are geology and the collection of minerals. His large collection of agalmata-lite Chinese carvings and Indian pottery is especially fine. It is enhanced by many fine examples of native Indian weaving. His medical specialty is cardiology, particularly electrocardiography.

#### DR. PHIL A. SCOTT

Dr. Scott was born Nov. 17, 1896, at Emmetsburg, Iowa, to E. J. and Myra Scott. He received his preliminary education in Emmetsburg, Iowa. Later at Cornell College he was granted the A.B. degree. He received the B.S. degree at the University of Chicago and the M.D. degree from Rush Medical College in 1922, interning at St. Luke's Hospital in Chicago. Dr. Scott was assistant to Dr. E. R. LeCount at Tacoma General Hospital for five years. Following this, he took post-graduate work at Henry Ford Hospital, Detroit, Mich., in surgery and urology for thirty months. He practiced two years in Tulsa, Okla., moving back to Iowa where he has carried on a general practice in Spirit Lake, Iowa, since 1936, giving especial attention to urology.

In 1936 he was married to Alice Klein of Sioux Center, Iowa. Dr. Scott is an examiner for several insurance companies, including the Northwestern Travelers and the Equitable of Iowa. He is co-partner and owner of the Spirit Lake Hospital.

#### DR. J. J. BUCHANAN

Dr. J. J. Buchanan was born on a dairy farm three miles from Robinson, Ill., on Oct. 31, 1905. His father, George Buchanan, died when John was two years old. His mother, Mary E. Dunlap, had been a school teacher before her marriage.

She moved to Bloomington, Ind., when John was 10 years old. There John completed grade and high schools and a four-year college course at Indiana State University. His medical education was completed in Indianapolis, Ind., where he obtained the M.D. degree in 1932. He worked in the office of Dr. R. E. Mitchell of Indianapolis during the last two years of medical training.

Dr. Buchanan passed the competitive examination for internship in the U. S. Navy in April, 1932. Owing to lack of funds of the Navy, he took an internship in the St. Francis Hospital in La Crosse, Wis., where he served a year's rotating service. While at St. Francis Hospital, Mrs. C. M. Coldren, who lived in La Crosse, urged young Buchanan to visit her father-in-law, Dr. Cassius M. Coldren, at Milford. The latter then was 74 years old, and though serving his people to the best of his ability, he needed help. Dr. Buchanan went to Milford, opening an office on July 1, 1936.

He was married to Marian E. Williams of Milford on Oct. 4, 1936. They have two children, Kay Ann 6, and John J., Jr., 4.

On May 23, 1942, Dr. Buchanan received his commission as lieutenant in the U. S. Naval Reserve. Lieutenant Buchanan served as medical examiner at a recruiting office in Cincinnati, Ohio, later being assigned to the U.S.S. Saugatucka, a fleet tanker, for fourteen and one-half months. He then spent ten weeks at the School of Aviation Medicine at Pensacola, Fla., and is now at the Air Strip, Camp Pendleton, with the Fighter Squadron of Marines.

He is a general practitioner but does surgery, has fitted glasses, and handles psychiatric cases occasionally. He plans to specialize in some branch of surgery after the war.

Dr. Buchanan has been an examiner for the New York Life Insurance Company, the Equitable Life Insurance Company of Iowa, the Prudential Insurance Company, and several smaller companies.

#### DR. HERMAN KOOIKER

Dr. Herman Kooiker was born on a farm six miles north of Orange City in Sioux County, Iowa, April 20, 1888. He was graduated from Hull, Iowa, grade and high schools. From 1910 to 1913 he attended Hope College in Michigan. Dr. Kooiker received his medical education at the Medical College of Minnesota University from which he was granted the B.S. and M.D. degrees. He interned at the University Hospital and in 1924 attended the Postgraduate Medical College, Chicago, Ill.

In December, 1918, he was married to Lulu

Flime. They have two sons, John Elbert and Robert H. Kooiker. From 1941 to 1943 Dr. Kooiker had a general practice and did refracting in Milford, Iowa. At present he is engaged by the Knights of St. John and its auxiliary and is also local health officer. In addition, Dr. Kooiker is in the employ of the Cincinnati Steel Casting Company.

#### DR. CHARLES S. SCHULTZ

Dr. Schultz was a physician in practice at Lake Park, Iowa, when the writer first spent summer vacations there in 1902. It was not until 1904 that he met him. He was well read in medicine and a successful practitioner, having just left Lake Park and established himself at Spirit Lake in 1902.

#### DR. L. M. VAN BUREN

Dr. L. M. Van Buren came to Spirit Lake in 1887. He was graduated from the Berkshire Medical School, Pittsfield, Mass., in 1853. He was 53 years old when he located in Spirit Lake, having previously practiced in Wisconsin and eastern Iowa. After a few years he retired from active practice but continued to live in Spirit Lake until his death in 1911.

#### DR. W. L. BULLOCK

Dr. W. L. Bullock was born in 1871 at Champaign, Ill., to Lewis Bullock and Ellen Hager Bullock. He was graduated from Shelby High School in 1894 and from the Medical Department of the State University of Iowa in 1901. He took postgraduate work at various times and places, meanwhile carrying on a general practice in which he is still successfully engaged in Lake Park.

Dr. Bullock is local surgeon for the C., R. I. & P. Railroad at Lake Park. He is also examiner for many old line insurance companies.

#### DR. C. M. COLDREN, SR.

Dr. C. M. Coldren was born in Topeka, Ind., July 3, 1860, to Susan Hunter and Harvey M. Coldren. His academic training was at Ligonier Academy, Hillsdale College, Hillsdale, Mich., and the University of Michigan at Ann Arbor, where he was graduated from the medical college in 1889. In the year 1892 he was married to Emma Green Lucas and came to Dickinson County soon after. He passed away May 10, 1936, in Omaha, Neb.

#### DR. ENNISS

A Dr. Enniss located in Lake Park, remaining from 1896 to 1897. He removed elsewhere and nothing else is known about him.



## DR. Q. C. FULLER

Dr. Q. C. Fuller was born July 29, 1867, at Pawpaw, Ill. He came with his parents, Mr. and Mrs. A. T. Fuller, to Iowa in 1880. In 1890 he was graduated at Iowa State College in the course in veterinary medicine following which he practiced in Harlan, Iowa, for two years. He later enrolled in the medical department of Drake University and also in a course at the Chicago Medical College. Dr. Fuller started practicing at Milford, Iowa, and spent the rest of his life there. He operated the Milford General Hospital, which for a number of years was the only hospital in Dickinson County. He was a much loved physician and a man active in all civic affairs. For eighteen years he was president of the school board of his home city. He was killed in an automobile accident on Sept. 24, 1937.

Dr. Fuller was married twice. The children of the first marriage were Stanley Fuller and Mrs. Lucille Wiggins. His second wife was Opal Gillette, a graduate of Iowa State College in the class of 1905 and a sister of State Senator Lester Gillette. There were five children of this second marriage, three daughters and two sons. The oldest daughter, Grace, was a student at Iowa State College at the time of her father's death.

AMERICAN ACADEMY OF DERMATOLOGY  
AND SYPHILOLOGY

The fifth annual meeting of the American Academy of Dermatology and Syphilology is scheduled for Cleveland, Ohio, from Saturday, December 7, through Thursday, December 12, it is announced by Dr. Earl D. Osborne, secretary of the Academy, 471 Delaware Ave., Buffalo, N. Y. This will be the first meeting of the group since December, 1941, and it is expected to attract more than one thousand members, according to Dr. Osborne.

The principal sessions will be held at the Statler Hotel with daily symposia at the Allerton Hotel and teaching clinics at Cleveland City Hospital Monday, Tuesday and Wednesday of the convention week. There will be an extensive scientific and commercial exhibit held in connection with the meeting, which will feature special lectures by members of the Academy and by famed authorities in such other fields as atomic energy, radiology, and surgery.

Most special lectures, special courses and symposia will be presented on the first four days of the week, beginning December 9. It is pointed out that the Academy is chiefly concerned with teaching, and in consequence the entire session will be in the form of "postgraduate" seminar for the visiting physicians from all parts of the United States and Canada. The annual banquet will be held Wednesday night of the convention week. Dr. Harold M. Cole of Cleveland is general chairman for local arrangements.

Special lectures will be held on precancerous epidermis, biologic effects of atomic energy, capillary circulation of the skin, dermatologic manifestations of blood dyscrasias, chemosurgical treatment of external cancer, pathology of disseminated erythematous lupus, and "Is Nationalization of the American Economy Unavoidable?"

There will be special courses given in dermatopathology, mycology, x-ray and radium therapy, medical photography, industrial dermatoses, tuberculides, sarcoid and leprosy; drug eruptions, bacteriology of the skin, and mucous membrane diseases.

Subjects for symposia will include pharmaceutical therapy, syphilis, x-ray and radium therapy, hormones in dermatology, physical therapy, diagnosis and treatment of ringworm, dermatopathology round table, physiology and chemistry of the skin, allergy, and the psychosomatic factor in skin diseases.

Officers of the Academy are Dr. George M. MacKee, New York City, president; Dr. Everett C. Fox, Dallas, Tex., vice president; Dr. Clyde L. Cumber, Cleveland, Ohio, treasurer; and Dr. Earl D. Osborne, Buffalo, N. Y., secretary.

## AMERICAN ACADEMY OF ALLERGY

The American Academy of Allergy will hold its annual convention at Hotel Pennsylvania, New York City, November 25 to 27 inclusive. All physicians interested in allergic problems are cordially invited to attend the sessions as guests of the Academy without payment of registration fee. The program has been arranged to cover a wide variety of conditions where allergic factors may be important. Papers will be presented dealing with the latest methods of diagnosis and treatment as well as the results of investigation and research. Advance copies of the program may be obtained by writing to the Chairman on Arrangements, Dr. Horace S. Baldwin, 136 East 64th Street, New York City, prior to November 10.



# THE JOURNAL BOOK SHELF

## BOOKS RECEIVED

**ALLERGY IN PRACTICE**—By Samnel M. Feinberg, M.D., Associate Professor of Medicine and Chief of the Division of Allergy, Northwestern University Medical School; President, American Association for the Study of Allergy, 1942-1943; with the collaboration of OREN C. DURHAM, Chief Botanist, Abbott Laboratories, and CARL A. DRAGSTEDT, Ph.D., M.D., Professor and Chairman of the Department of Pharmacology, Northwestern University Medical School. The Year Book Publishers, Inc., Chicago; Second, Revised Edition, 1946. Price, \$10.50.

**ANNUAL REPRINT OF THE REPORTS OF THE COUNCIL ON PHARMACY AND CHEMISTRY OF THE AMERICAN MEDICAL ASSOCIATION FOR 1945**—with the comments that have appeared in the *Journal*. American Medical Association, Chicago, 1946.

**THE CHEST, A HANDBOOK OF ROENTGEN DIAGNOSIS**—By Leo G. Rigler, M.D., Professor and Chief, Department of Radiology, University of Minnesota. The Year Book Publishers, Inc., Chicago, 1946. Price, \$6.50.

**COMPLETE HANDBOOK ON STATE MEDICINE**—By J. Weston Walch. Platform News Publishing Company, Portland, Me. Price, \$2.50.

**COMPULSION, THE KEY TO COLLECTIVISM**—A treatise on and evidence of attempts to foist on the American people compulsory health insurance, and explanation of the implications involved. Published by the National Physicians Committee, Chicago, 1946. Free upon request.

**NEW AND NONOFFICIAL REMEDIES, 1946**, Containing descriptions of the articles which stand accepted by the Council on Pharmacy and Chemistry of the American Medical Association on January 1, 1946. Issued under the direction and supervision of the Council on Pharmacy and

Chemistry of the American Medical Association. American Medical Association, Chicago, 1946.

**PENICILLIN, ITS PRACTICAL APPLICATION**—By Sir Alexander Fleming, F.R.C.S., F.R.C.P., F.R.S., Nobel Prize Award, Discoverer of Penicillin; Professor of Bacteriology, University of London, St. Mary's Hospital; and twenty-eight contributors in special fields of medicine.

**PRACTICAL MALARIOLOGY**—Prepared under the auspices of the Division of Medical Sciences of the National Research Council by PAUL F. RUSSELL, M.D., M.P.H., Colonel, M. C., A. U. S., Parasitology Division, the Army Medical School, Field Staff, International Health Division, Rockefeller Foundation (on leave); LUTHER S. WEST, Ph.D.; Head of Biology Department, Northern Michigan College of Education, Major, Sn.C., A. U. S. (Reserve); formerly Entomologist, Parasitology Division, Army Medical School; REGINALD D. MANWELL, Sc.D., Professor of Zoology, Syracuse University, New York; formerly Captain Sn.C., A.U.S., Protozoology Section, Parasitology Division, Army Medical School. Foreword by RAYMOND B. FOSDICK, President of the Rockefeller Foundation. W. B. Saunders Company, Philadelphia, 1946. Price, \$8.

**A PRIMER FOR DIABETIC PATIENTS**—By Russell M. Wilder, M.D., Ph.D., F. A. C. P., Professor and Chief of the Department of Medicine of the Mayo Foundation, University of Minnesota; Senior Consultant in Division of Medicine, Mayo Clinic. Eighth Edition, Reset. W. B. Saunders Co., Philadelphia, 1946. Price, \$1.75.

**SEX PROBLEMS OF THE RETURNED VETERAN**—By Howard Kitching, M.D., Foreword by Ernest R. Groves, Professor of Sociology, University of North Carolina. Emerson Books, Inc., New York, 1946. Price, \$1.50.

## BOOK REVIEWS

### ANNUAL REPRINT OF THE REPORTS OF THE COUNCIL ON PHARMACY AND CHEMISTRY OF THE AMERICAN MEDICAL ASSOCIATION FOR 1945

With the comments that have appeared in the *Journal*. American Medical Association, Chicago, 1946.

This book contains reports of the council on pharmacy and chemistry which were adopted and authorized for publication during 1945. These reports are reprinted from the *Journal* of the American Medical Association and augmented with additional correlated material. E. M. G.

### COMPULSION, THE KEY TO COLLECTIVISM

A treatise on and evidence of attempts to foist on the American people compulsory health insurance, and explanation of the implications involved. Published by the National Physicians Committee, Chicago, 1946.

This booklet is available to every physician upon application to the National Physicians Committee, 75 East Wacker Drive, Chicago 1, Ill., and presents a summary of the hearings on the Wagner-Murray-Dingell Bills before the Committee on Education and Labor of the United States Senate. The report is an interesting presentation of the methods used by politicians to manipulate witnesses and spread propaganda to the advantage of the politician rather

than the medical profession. The facts given are all from public record. Those physicians interested in a well organized summary of the lengthy hearings are urged to apply to the National Physicians Committee for the booklet. E. M. G.

### DISEASES OF THE RETINA

By Herman Elwyn, M.D., Senior Assistant Surgeon, New York Eye and Ear Infirmary. The Blakiston Company, Philadelphia and Toronto, 1946. Price, \$10.

This is an excellently written and illustrated book of the common and uncommon diseases affecting the retina. The heredity, clinical picture, pathology, course and variation in each disease is well and thoroughly described.

This book should be a help to every physician in all types of practice in evaluating and recognizing retinal changes as well as to the ophthalmologist. J. H. M.

### ELECTROCARDIOGRAPHY IN PRACTICE

By Ashton Graybiel, M.D., Capt., M. C., U. S. N. R., Co-ordinator of Research, U. S. Naval School of Aviation Medicine, Pensacola, Florida; and PAUL D. WHITE, M.D., Lecturer in Medicine, Harvard Medical School, Physician, Massachusetts General Hospital; with the assistance of LOUISE WHEELER, A.M., Executive Secretary; the



Cardiac Laboratory, Massachusetts General Hospital; CONGER WILLIAMS, M.D., Assistant in Medicine, Harvard Medical School and Massachusetts General Hospital. Second edition. W. B. Saunders Company, Philadelphia, 1946. Price \$7.

This latest edition on electrocardiography by these authors follows a similar previous edition of a few years ago. The present book is a more complete volume and records the numerous advances in this field since the previous edition. In particular, the discussions and illustrations of the precordial leads add much relatively new information. The tables in this volume are new and are very helpful in providing a quick and ready reference chart to give, briefly, information on electrocardiographic findings in many different conditions. They are a very useful addition. The book has a wealth of instructive illustrations that cover wide variations in the normal as well as all types of electrocardiographic abnormalities. Here again the illustrations include always the chief precordial leads. With each illustration brief but fairly complete clinical data is available and considered in the final comment on the tracing.

The first two sections of the book deal with the normal electrocardiogram and the many variations from this that are found in normal individuals. There are also illuminating discussions of various physical and physiologic principles that form the basis of electrocardiography and that must be taken into consideration in our interpretation of the finished tracing. Our knowledge of these principles is clarified by their treatment in this book. The main body of the book deals, of course, with the interpretation of abnormal electrocardiograms. It is quite complete, and the method of presentation seems ideal. The last section of the book is devoted to a rather large series of interesting electrocardiograms for interpretation. In the appendices there are discussions and illustrations of unipolar leads, esophageal leads, and a most interesting section on the effect of exercise and anoxemia on the electrocardiogram.

For anyone interested in electrocardiography we believe that there is no more complete, concise, and informative text presently available than this volume. All physicians interested in the field of heart diseases can read and study this book with much resulting profit to themselves. We found it easy to read, and we believe anyone interested in this field will enjoy it.

H. C. B.

#### NEW AND OFFICIAL REMEDIES, 1946

Containing descriptions of the articles which stand accepted by the Council on Pharmacy and Chemistry of the American Medical Association on January 1, 1946. Issue under the direction and supervision of the Council on Pharmacy and Chemistry of the American Medical Association.

American Medical Association, Chicago, 1946.

This book brings up-to-date articles accepted by the council on pharmacy and chemistry for prophylactic or therapeutic use by the physicians. Its value is well understood by all physicians who have had occasion to refer to it since the inception of the council in 1905.

E. M. G.

#### RENAL DISEASES

By E. T. Bell, M.D., Professor of Pathology in the University of Minnesota, Minneapolis, Minn. Lea & Febiger, Philadelphia, 1946. Price, \$7.

This text is most comprehensive in the presentation of a real treatise on renal disease. The first four chapters deal with a classification of renal diseases, physiology and pathologic physiology, histology and a 104-page chapter on developmental anomalies. There is an excellent chapter on obstruction of the urinary tract. Newer concepts and appraisal are included in chapters on glomerulonephritis, tubular diseases, and pyelonephritis. The section on diseases of the blood vessels includes an appraisal of recent views on the relation of the kidneys to hypertension and renal pathology in diabetes mellitus. Metabolic disorders such as lipomatosis, calcium metabolism, uric acid, etc., are discussed. The last chapter is a clear, up-to-the-minute classification of kidney tumors.

The book is an excellent combination of renal pathology, a clinical approach to kidney disease, and concise therapeutic suggestions. The many photomicrographs add much to the completeness of the text. It should be in the library of all clinicians and pathologists.

J. W. C.

#### THE 1945 YEAR BOOK OF PEDIATRICS

Edited by Isaac A. Abt, M.D., Professor of Pediatrics, Northwestern University Medical School; Attending Physician, Passavant Hospital; Consulting Physician, Children's Memorial Hospital and St. Luke's Hospital, Chicago. With the collaboration of ARTHUR F. ABT, Comdr., M.C., U.S.N.R., Associate Professor of Pediatrics, Northwestern University Medical School; Associate Attending Pediatrician, Chicago Maternity Center; Attending Physician, Spaulding School for Crippled Children and La Rabida Jackson Park Sanatorium, Chicago. The Year Book Publishers, Chicago, 1946. Price, \$3.

The Year Book of Pediatrics offers to the general practitioner and to the pediatricist a concise summary of all the current pediatric literature. The more unusual pediatric conditions as well as the newer advances in the diagnosis of the common diseases are reported.

This book will serve as a practical guide to the modern methods of treatment.

C. F.

# SOCIETY PROCEEDINGS

## MEETINGS

### Black Hawk County

The Black Hawk County Medical Society met October 23 for a 6:30 p. m. dinner in Black's Tea Room, Waterloo. Dr. Ruben Nomland, Professor of Dermatology, University of Iowa, spoke on "Diseases of the Skin the General Practitioner Should Recognize."

### Boone-Story Society

The first fall meeting of the Boone-Story Medical Society was held September 24 at the Indian Creek Golf and Country Club with thirty in attendance. Following dinner, a short business meeting was held during which plans for the coming year were made.

### Cerro Gordo County

The Cerro Gordo County Medical Society meeting was held at Hotel Hanford, Mason City, October 8 following a complimentary dinner. Fifty-five were present, including a large number of guests. Following the business meeting at which Dr. A. B. Phillips, president, presided, Dr. Horace M. Korns of Dubuque spoke. His subject was "Coronary Heart Disease."

### Dallas-Guthrie Society

The Dallas-Guthrie Medical Society and Woman's Auxiliary met in the Presbyterian Church Hall, Panorama, October 17. New officers elected were: Dr. J. F. Loosbrock, Perry, president; Dr. Donald W. Todd, Guthrie Center, vice president; Dr. S. J. Brown, Panorama, secretary; Dr. A. G. Felter, Van Meter, delegate; Dr. Howard W. Smith, Woodward, alternate; Dr. C. A. Nicoll, Panorama, board of censors. Dr. R. L. Parker spoke on "Twenty Years in State Medical Work," followed by Miss Mary McCord whose topic was "Necessity for Backing Iowa Medical Service." Dr. Felter presented a paper on "Coronary Disease Complicated by Diabetes."

### Iowa and Illinois Association

The quarterly meeting of the Iowa and Illinois Central District Medical Association will be held in the Blackhawk Hotel, Davenport, November 7. Dinner will be served at 6:30 p. m., following which Dr. H. P. Miller of Rock Island, Ill., will deliver a short address on "Diagnosis and Treatment of Phlebotrombosis." The guest speaker will be Dr. Francis D. Murphy, professor of medicine at Marquette University, Milwaukee, Wis., who will deliver an address on "Chronic Nephritis." He will be introduced by Dr. J. G. Gustafson of Coal Valley, Ill., and the discussion of his address will be opened by Dr. A. Walter Wise of Rock Island, Ill.

### Johnson County

Dr. Russell Myers, Chief of the Division of Neurosurgery of the University Hospitals, was the featured speaker at the Johnson County Medical Society meeting held at Hotel Jefferson October 2. The subject he chose was "Some Surgical Experiences in the Treatment of Paralysis Agitans." Part of the presentation consisted of a movie, following which Dr. A. L. Sahs, Professor in the Department of Neurology, University Hospitals, led the discussion. The group also shared a six o'clock dinner.

### Linn County

The Linn County Medical Society held its regular meeting at the Roosevelt Hotel, Cedar Rapids, at 6:30 p. m. October 10. Dr. Russell Herrold of Chicago, Ill., spoke on "Problems Commonly Encountered in Urology."

### Marshall County

The Marshall County Medical Society met October 1 at the St. Paul's Parish House in State Center, dinner being served by the Ladies' Aid Society. Dr. Frank R. Peterson, Chief Surgeon at the University Hospitals, Iowa City, spoke on "Surgical Complications of Peptic Ulcer." Several physicians from surrounding counties were guests of the group.

### Polk County

The Polk County Medical Society met in conjunction with the Iowa Methodist Hospital staff October 16. Following a 6:30 o'clock dinner, a clinic was held at the Raymond Blank Memorial Hospital for Children, the subject being "Poliomyelitis: Review of Experience in 1946 with Presentation of Selected Cases." Participating physicians were members of the Departments of Pediatrics and Orthopedics of Iowa Methodist Hospital.

### Scott County

The October meeting of the Scott County Medical Society was held October 1 at the Lend-A-Hand Club, Davenport. Following dinner Dr. J. W. Dulin of Iowa City spoke on "Nonspecific Ulcerating Lesions of the Intestinal Tract."

### Woodbury County

The Woodbury County Medical Society met October 17 in the ballroom of the Martin Hotel, Sioux City, for a 6:30 o'clock dinner. Dr. Forester Raine of Milwaukee, Wis., was the guest speaker, his topic being "Management of Malignancies of the Gastrointestinal Tract."



## PERSONAL MENTION

**Dr. William Collings, Dr. William Keettel Jr., and Dr. Max Wheatley** have been added to the teaching staff of the State University of Iowa College of Medicine. Dr. Collings is assistant professor of physiology, having formerly taught at the University of Oklahoma and the University of Texas. Dr. Keettel is assistant professor of obstetrics and gynecology, having received his residency training at Iowa after graduation from the University of Nebraska. Dr. Wheatley is assistant professor of anatomy and was associated with the anatomy department there until 1944.

**Dr. Donald L. Cross** recently moved to Boone to establish a practice, coming there from Coon Rapids where he practiced for three years before serving in the navy for a similar period.

**Dr. John C. Cunningham**, who formerly practiced in Dubuque, has been named head of the ophthalmology department of the University of Vermont College of Medicine at Burlington, Va., and will also engage in private practice there. Dr. Cunningham served in the Army Medical Corps for forty-six months after leaving Dubuque, holding the rank of Major at the time of his release.

**Dr. Claude G. Dickey** of Des Moines retired from active practice recently and with his wife has moved to Lakewood Village, Calif. He came to Des Moines in 1916, having practiced in Cambridge prior to that time.

**Dr. Wilbur S. Eaton** has become associated with Dr. R. G. Anspach at the Colfax Sanitarium. Dr. Eaton was graduated from the College of Medicine at the University of Nebraska in 1937. Earlier he had coached football at Notre Dame and at Creighton University.

**Dr. M. D. Enna** is now associated with Dr. Francis B. O'Leary in George. A graduate of the University of Kansas, he served in the army for three years as Division Surgeon of the Sixth Infantry Division in Korea, and the last two years on various South Pacific islands. Dr. O'Leary and family are now living in Sibley though he continues to practice in George.

**Dr. Ballard Hayworth** of Sioux City has joined Dr. T. R. Campbell of Sioux Rapids in the practice of medicine. Dr. Hayworth was graduated from the State University of Iowa College of Medicine, serving his internship in Detroit, Mich. He was in service two years.

**Dr. Phoebe T. Goggin** has been appointed assistant professor on the hospital staff at Iowa State College, Ames, and will also teach hygiene courses. Dr. Goggin studied at the Royal College of Surgeons, Edinburgh, Scotland.

**Dr. Thomas J. Irish** has resumed practice in Forest City after serving three years as a Lieutenant-Commander in the Navy Medical Corps. He is specializing in general surgery.

**Dr. Louis Jacques**, a graduate of the State University of Iowa College of Medicine, who was recently discharged from service, has become an assistant to Dr. C. M. Cantrell of Lone Tree. Dr. R. E. Hodges, who assisted Dr. Cantrell during the summer, has returned to Iowa City and his work at University Hospital.

**Dr. M. T. Johnson**, formerly medical director of district health service No. 5 with headquarters in Fort Dodge, began his duties as director of Delta County health unit, Escanaba, Mich., October 1. Dr. Johnson had been medical director of district No. 5 since July, 1945. Prior to that time he attended the University of Michigan's public health school and engaged in private practice at Lake Mills, Iowa.

**Dr. F. W. Kapke** of Milwaukee, Wis., recently discharged from the Army Medical Corps, has joined the Park Hospital staff in Mason City as physician in obstetrics and gynecology. While in service Dr. Kapke worked with civilian dependents at the Welch Convalescent Hospital, Daytona Beach, Fla.

**Dr. J. Howard Laubscher**, who was discharged from the Army Medical Corps October 21, has entered private practice in Rockford, Ill.

**Dr. Lloyd H. Launder**, formerly of Marshalltown, has opened offices for the practice of medicine and surgery in San Diego, Calif. Dr. Launder left for San Diego early in the year but has been delayed in the opening of his offices because of labor and priorities. He had been in Marshalltown twenty-five years.

**Dr. C. Dudley Miller** of Omaha, Neb., is now associated with Dr. C. L. Sievers of Denison in the practice of medicine and surgery. For the past five years Dr. Miller has been serving as medical officer in United States Marine Hospitals, a division of the United States Public Health Service, holding the rank of Senior Assistant Surgeon at the time of his discharge. He was graduated from the Creighton University School of Medicine in 1941.

**Dr. A. J. Mullmann**, formerly of Adel, has opened offices in Perry. Dr. Mullmann has been serving in the Presbyterian Hospital, Chicago, Ill., since receiving his discharge from the army eight months ago. He had practiced in Adel ten years.

**Dr. C. S. O'Brien** of Iowa City was elected president of the Iowa Academy of Ophthalmology and Otolaryngology at the group's annual meeting in Mason City recently. Other officers elected were Dr. E. P. Weih, Clinton, president-elect, and Dr. Carl A. Noe, Cedar Rapids, secretary.

**Dr. Rollin M. Perkins**, allergy specialist who was recently discharged from the Army Medical Corps with the rank of Captain, has announced the re-opening of his offices in Davenport. Dr. Perkins entered service in January, 1944, returning to the United States in June, 1945.

**Dr. L. H. Prewitt**, eye, ear, nose and throat specialist of Ottumwa, recently returned from Chicago and Iowa City where he spent several months taking special work in dermatology. He is resuming practice in temporary quarters until his permanent offices, now under construction, are completed.

**Dr. Terence M. Reilly** has entered into partnership with his father-in-law, Dr. F. C. Armstrong, for the general practice of medicine and surgery in Cascade. Dr. Reilly was recently discharged from the Army Medical Corps with the rank of Major. A native of Brooklyn, N. Y., he received his medical degree from Georgetown University, Washington, D. C., in 1938.

**Dr. Pierre Sartor** of Titonka was honored by the Kossuth County Medical Society at a recognition dinner for fifty years' service as a practicing physician September 23. Dr. Sartor was presented with a certificate of membership in the Fifty Year Club of the Iowa State Medical Society and a fifty year lapel button by Dr. P. V. Janse, president of the Kossuth County Medical Society.

**Dr. Louis Savre** of Osage closed his office October 1 because of poor health. He will continue to see patients in his home, however. Dr. Savre has practiced in Osage since 1901.

**Dr. H. L. Schrier** has become associated with Dr. J. D. Parker of Fayette in the practice of medicine and surgery. For the past three years he has been in service, holding the rank of Major at the time of his release. Dr. Schrier received his medical degree from the Royal College, Glasgow, Scotland.

**Dr. Ralph J. Selman** has returned to Ottumwa after more than five years of service in the Army Medical Corps and has established offices as a general practitioner. Dr. Selman, a former county physician, served in both World Wars, holding the rank of Colonel at the time of his release from World War II.

**Dr. Frederick S. Sperry** has opened offices for the general practice of medicine in Clarinda. He was recently discharged from the army after serving nearly three years, having been graduated from the State University of Iowa College of Medicine in 1941. Dr. Sperry has just completed a refresher course in Akron, Ohio, where he did his internship.

**Dr. W. A. Stephenson**, recently released from

active duty with the Navy Medical Corps, has opened offices for the general practice of medicine in Ames.

**Dr. T. F. Thornton, Jr.** has become associated with his father, Dr. T. F. Thornton, in the practice of medicine in Waterloo. He received his B.A. and M.D. degrees from the State University of Iowa, interning at the University of Chicago clinics. Prior to entering service in June, 1945, he took four years of graduate work in surgery and chest diseases at the University of Chicago.

**Dr. Charles W. Wilson** began the practice of medicine in Manson September 13, having purchased the practice of the late Dr. R. G. Hinrichs. Dr. Wilson was recently released from the Navy Medical Corps after three years of service. He was graduated from the State University of Iowa Medical School and took his internship in Boston, Mass.

#### MARRIAGE ANNOUNCEMENTS

Miss Betty Jane Thomas, daughter of Mr. and Mrs. D. R. Thomas of Iowa City, became the bride of Dr. Wesley M. Page, son of Mr. and Mrs. M. L. Page of Bedford, September 27. The ceremony was performed in the First Methodist Church, Iowa City, with Dr. L. L. Dunnington officiating. The couple is at home in Lake City where Doctor Page is on the staff of McVay Memorial Hospital.

#### DEATH NOTICES

**Bisgard, James A.**, of Harlan, aged seventy-seven, died October 9 at his home following an extended illness. He was graduated from the University of Nebraska College of Medicine in 1894 and at the time of his death was a life member of the Shelby County and Iowa State Medical Societies.

**Sells, Franklin Wesley**, of Osceola, aged seventy-three, died September 27 following a one-month illness. He was graduated from the Drake University College of Medicine in 1896. At the time of his death, Dr. Sells was a member of the Clarke County and Iowa State Medical Societies.

#### SPEAKERS BUREAU RADIO SCHEDULE

WOI—Wednesdays at 2:45 p. m.

WSUI—Thursdays at 2:45 p. m.

Nov. 6-7 Ulcers

Daniel A. Glomset, M.D.

Nov. 13-14 Problems of Old Age

J. Stuart McQuiston, M.D.

Nov. 20-21 Automobile Accidents

Miss Annamae Heaps

Nov. 27-28 Newer Drugs in Medicine

Thomas E. Shea, M.D.



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## THE TREATMENT OF WAR INJURIES OF THE HAND IN THE U. S. ARMY

Julian M. Bruner, Lt. Col., M.C.,

William Beaumont General Hospital,  
El Paso, Texas

The most striking feature of the treatment of war injuries of the hand in the U. S. Army was their treatment as a separate entity. Previously these wounds had been classified as plastic, orthopedic, or neurosurgical cases according to the structures involved. The frequency in war wounds of combined lesions of skin, nerve, bone, joint and tendon, led to the conclusion that wounds of the hand constituted a separate problem necessitating special treatment by surgeons competent to deal with any or all of the above structures.

During the early course of the war plans were made by the War Department for the treatment of wounds of the hand. Dr. Sterling Bunnell was appointed civilian consultant to the Surgeon General who, in consultation with Dr. Bunnell, drew up general principles of early treatment for use in overseas theaters. In this country, nine general hospitals were designated as hand centers.

The majority of hand injuries were enemy inflicted bullet and shrapnel wounds, but many were due to gasoline burns, to crushing injuries in gun mechanisms, and to the premature explosion of grenades, causing partial or complete loss of the hand. In a series of 200 cases analyzed as to mechanism of injury, 56 per cent were bullet and shrapnel wounds, 27 per cent were due to accidents including burns, 11 per cent were the result of accidental discharge of firearms, and 5 per cent were nontraumatic, the result of infection.

The total number of wounds of the hand sustained in this war is not available, but it is significant that in November, 1945, there were 11,350 hand cases in general hospitals in the United States. It was estimated by the Surgeon General that each case required an average of two and one-half operations which brought the number of

uncompleted hand operations as of that date to about 28,000. It became necessary in December, 1945, to retain in the service thirteen medical officers trained in hand surgery in order to complete this task.

### Treatment

The treatment of war wounds of the hand as recently practiced in the army may be divided into three phases from the standpoint of time and geography: (1) treatment in forward areas; (2) treatment in general hospitals in intermediate areas; and (3) treatment in general hospitals in the zone of the interior.

The mode of handling these cases in forward areas often made the difference between a useful hand and a hopelessly crippled hand at a later date. Besides those lifesaving measures including the arrest of hemorrhage, the treatment of shock, and the administration of sedatives, three points are of special interest as related to the hand. (1) The initiation of penicillin or sulfa therapy at an early date was of infinite value in lowering the incidence of cellulitis, osteomyelitis, fascial space, and tendon sheath infection. The period of drainage from these wounds was significantly lessened. The degree of crippling seen as a result of hand infection in civil life ten years ago was rarely observed in these war wounds. (2) Conservatism in debridement as practiced in evacuation hospitals was of particular importance in the hand. The thumb and fingers were often conserved even when they appeared hopelessly damaged as to function. At a later date these members sometimes became functional, or if not, they were invaluable sources of skin, bone, or nerve to be used in hand reconstruction. (3) Early splinting in the position of function, together with the application of a pressure dressing was of prime importance. The position agreed upon is with the proximal joints of the fingers in 45-degree flexion, the middle and distal joints in slightly more flexion, the thumb in opposition, and the wrist in 20-30-degree dorsiflexion.

The second phase of treatment of these wounds took place in certain general hospitals (as in England and New Guinea) which had been designated for the treatment of plastic and hand cases. The length of stay in these hospitals varied greatly depending on the patient's condition. The treatment of fractures of the metacarpals and phalanges was often carried out at this time. Use of the banjo splint with fingers held out in full extension was not advised because of the inevitable stiffening of joints, particularly the proximal joints of the fingers. The method advised was that of skeletal traction of the fingers with the finger joints in flexion as described by Bunnell.

One of the outstanding contributions of the overseas hospitals to recovery from injuries of the hand was the closure of open wounds. This was accomplished by the application of split grafts and pedicle flaps to open wounds which otherwise would have required many months to heal with profound scarring. The early closure of these wounds avoided many of the dire effects of prolonged infection. It was notable that the great majority of hand wounds received at general hospitals in this country were healed, and thus it was possible to carry out reconstructive surgery at an early date.

The Hand Service at William Beaumont General Hospital was organized in January, 1945, under Col. William H. Frackelton, M.C. Dr. Bunnell made a tour of all hand centers in this country at that time and spent considerable time at each. These visits were invaluable to the medical officers doing hand surgery. Not only did Dr. Bunnell examine hundreds of patients in a detailed manner, but he personally demonstrated certain operative techniques of his own. His textbook, "Surgery of the Hand," has been used as a valuable reference work in army hand centers.

#### Waiting Period

Many patients with recent hand wounds expected reparative surgery to be done at once on transfer to general hospitals in this country. However, it was necessary in most cases to allow time for the disappearance of residual infection and for the maturation and resolution of scar tissue. During this waiting period three measures were found to be of definite value.

(1) Corrective splinting was of major importance. Splints were designed to overcome existing contracture and malpositions. They were made light in weight, and force was applied by elastic traction or pressure whenever possible.

(2) Physiotherapy, consisting usually of whirlpool baths, light massage, and exercise, was of

great value in early stages of treatment in helping to resolve residual swelling and induration.

(3) Occupational therapy was found indispensable in later stages of treatment. The patient was thus encouraged to take an active part in his own rehabilitation, and the results in improved hand function and general mental attitude were striking.

Certain patients needing long periods of time before surgery could be done were given convalescent furloughs for work at home or on the farm, and on return to the hospital they showed remarkable improvement in circulation of tissues and general softening of the hand. A period of from three to six months from the date the wound stopped draining was considered necessary before reconstructive surgery could be undertaken.

#### Special Procedures

The choice of procedures to be used was determined after careful physical and x-ray examination of the hand including neurologic examination. Consideration was given to the amount of recovery possible and to the patient's occupation in civil life. In general, the problem resolved itself into a correction of defects of the five tissues concerned, i.e., skin, nerve, bone, joint and tendon. A plan was mapped out for each patient and was adhered to as closely as possible. General anesthesia was used routinely and surgery was performed in a field rendered bloodless by tourniquet. A few of the procedures used will now be described under the heading of tissues involved.

(1) *Skin*: Adequate skin coverage required a choice between split thickness grafts, free full thickness grafts, tube or flap pedicles, and various combinations of these. On the dorsum of the hand and fingers, heavy split thickness grafts were found very satisfactory in the replacement of cicatrix resulting from burns. However, when bone, joint, or tendon work was indicated, the application of pedicle skin carrying subcutaneous fat became a necessity. Free full thickness grafts were often of value in the palm where a satisfactory bed of subcutaneous tissue existed. Although many tube pedicles were constructed and were found to be of special value in certain locations, pedicle flaps were used whenever possible in order to save time. The raw surfaces of these flaps were always covered with split grafts.

(2) *Nerve*: The measures used to repair damage to nerves consisted of neurotomy, neurolysis, nerve suture, nerve transfer, and nerve graft. Nerve suture was performed not only upon median and ulnar nerves in the forearm, but on the motor branches of the median and ulnar nerves



in the hand and on the common and proper digital sensory nerves. In these latter purely sensory nerves, recovery of function was observed in a high percentage of cases. When a considerable defect in nerve trunk existed, transposition or nerve graft was performed.

(3) *Bone*: Reparative measures here included bone graft and osteotomy. Metacarpal fractures were generally treated by graft from the ilium, and fixation accomplished by Kirschner wires. In selected cases, fractures of phalanges were treated by key grafts obtained from the ulna.

(4) *Joints*: Fibrous ankylosis of metacarpophalangeal joints was generally treated by capsulectomy; arthroplasty of these joints was carried out in case of bony ankylosis or gross damage to the articular surfaces. The middle and distal joints were not subjected to either procedure because of likelihood of instability, but arthrodesis of these joints was frequently indicated when marked stiffening had taken place in poor position. Wrist fusion was undertaken when indicated by pain and limited motion in that joint.

(5) *Tendons*: Operative procedures here included tenolysis with or without insertion of paratenon grafts to furnish a gliding surface, tendon transfer, and tendon graft. The latter were obtained from the palmaris longus, sublimis flexor tendons of the hand, or the long extensor tendons on the dorsum of the foot.

### Special Procedures

Certain special procedures applicable to the hand were found to be of definite value.

(1) *Ray shift*: In cases where the long finger together with its metacarpal bone must be removed, the index with its metacarpal may be shifted in to the position of the long finger. This results in a narrow but strong three-finger hand in which the absence of the finger is not noticeable. A similar procedure is carried out when after loss of the ring finger ray, the fifth ray is shifted into its place.

(2) *Recession*: In cases where the distal portion of the metacarpal bone has been lost, the proximal phalanx of the corresponding finger may be recessed into position of the missing portion of the metacarpal bone.

(3) *Amputation with filet*: The skin covering the digit which is to be amputated can often be utilized to cover defects on the palm or on the dorsum of the hand since its blood supply from the digital vessels is usually excellent. Likewise, bone, nerve, and tendon from such a finger can be utilized for grafts or transfers.

(4) *Phalangization*: The deepening of inter-

digital clefts or the removal of webs between fingers is often accomplished by Z-plasty with or without supplementary split skin grafts. In contracture of the thenar web due to a loss of soft tissue, the use of pedicle flap or tube is generally required.

(5) *Pollicization*: The use of index finger or its metacarpal to replace a lost thumb can be accomplished by creation of a skin-lined cleft between the index and long fingers. Such thumbs were found to be very useful to the patient.

(6) *Construction of a thumb on the thenar eminence*: This may be done in selected cases, especially when a portion of the metacarpal of the thumb remains. In such cases the thumb retains useful motion. The application of a tube pedicle to the thenar area and later insertion of a rib graft has been the method employed.

(7) *Tendon transfer*: Operations of this kind were found of value in the following instances: (a) In ulnar nerve palsy the tendon-T operation of Bunnell was used to restore adduction of the thumb. (b) In median nerve palsy the opposition operation of Bunnell was employed to restore opposition of the thumb. (c) In radial nerve palsy with wrist drop, tendon transfers were employed to restore extension to wrist and fingers when recovery of the nerve lesion was doubtful.

### Conclusion

During the past year 1,578 patients were registered for treatment in the hand section of William Beaumont General Hospital. All but 200 of these cases have been completed. It has been possible to obtain marked improvement in hand function in the great majority of these patients. Many useless crippled hands have been transformed into useful hands with which the veteran can now follow some gainful employment.

Although the general principles of hand surgery were well established before the war, the war provided an unprecedented opportunity for the application of these principles. As a direct consequence of the war, surgery of the hand has emerged as a field which will find increasing value in the treatment of peacetime injuries of the hand in the years to come.

### CHANGE OF ADDRESS

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## THE MANAGEMENT OF DIABETIC ACIDOSIS AND COMA

Leslie W. Swanson, M.D., Mason City

Diabetic acidosis is always an emergency and requires prompt and energetic treatment. It may lead to death within a few hours, and therefore the manifestations are worthy of distinction from the usual symptoms and signs of diabetes mellitus. A patient with uncomplicated but uncontrolled diabetes mellitus may have polydipsia, polyuria, polyphagia, weight loss, unusual fatigability, loss of muscular strength, apprehensiveness, visual disturbances and pruritus. In a patient presenting a history of such symptoms, or one known to have diabetes, development of the following additional manifestations should lead to prompt consideration of acidosis: unusual weakness, muscular aching (sometimes erroneously ascribed to "influenza"), nausea, vomiting, Kussmaul respirations, mental dullness, flushed facies, acetone odor on the breath, restlessness or delirium, abdominal pain, dehydration, or actual coma.

Patients with uncontrolled diabetes will invariably present glycosuria and hyperglycemia, while those with acidosis will show in addition acetone in the urine, and frequently albumen and casts. Laboratory determination of reduced  $\text{CO}_2$  combining power of the blood is a more exact method of diagnosis. The symptoms and signs of acidosis vary with the severity of the acidosis—the greater the loss of alkali reserve, the greater the tendency toward complete coma. A mild acidosis of short duration will often show nothing but acetonuria, whereas a mild one of long duration may have headache, muscle aching, weakness, and restlessness. An acute severe acidosis may produce complete coma with Kussmaul respirations and depress the carbon dioxide combining power of the blood to below twenty volumes per cent. Severe acidosis of longer duration may be accompanied by azotemia and even depletion of the sugar stores to such an extent that the blood sugar is only moderately elevated.

Consideration of the causes and antecedent circumstances of acidosis helps in the diagnosis and evaluation of the history and findings. Unrecognized diabetes will lead to acidosis if it is severe enough. This situation seldom presents itself because knowledge of the symptoms of diabetes is so general that the average patient will seek treatment long before the stage of acidosis is reached. However, a child may develop diabetes in such severe form that it leads very quickly to diabetic acidosis. A second cause and a common one is

neglect of diabetes; that is, failure to follow a diet, failure to adjust properly the insulin dosage with the aid of urinalysis, or by refusal to take insulin. A third cause, seen commonly in practice, is the precipitation of acidosis by the development of an acute severe infection which throws the diabetic far out of control before he is fully aware of the seriousness of the situation. This is especially true when vomiting accompanies the infection.

The fundamentals of the treatment of acidosis are the correction of dehydration, restoration of adequate dextrose oxidation, and replacement of the electrolytes lost by excretion. Correction of dehydration may be accomplished by administering 3000 to 5000 cc. of fluid in the first twenty-four hours. If vomiting, coma, or acute dilatation of the stomach is present to prevent oral administration, the initial portion may be given intravenously or subcutaneously. Normal saline or Ringer's solution will help to restore electrolyte balance; Hartman's sodium lactate solution may be used as well. Restoration of adequate dextrose oxidation involves administration of glucose and insulin. Those who consider acidosis to be an acute insulin insufficiency may attempt to calculate initially the total insulin need and after the injection of this dosage begin glucose administration. I have preferred to give insulin and glucose solutions together on the theory that acidosis is the result of the accumulation of incompletely oxidized fatty acids secondary to inability of the body to oxidize adequate amounts of dextrose.

Under ordinary circumstances regular or unmodified insulin is simpler to use because of its greater flexibility due to shorter action. If the patient has been taking protamine zinc insulin prior to the development of acidosis, however, it is usually advisable to continue the same dosage and supplement it with regular insulin as needed.

Mild acidosis usually can be corrected by the simple administration of glucose solution orally in the form of fruit juice, perhaps with added sugar, accompanied by insulin in dosage estimated by ratio of approximately one unit of insulin to each two grams of glucose, as for example, 10 units for 200 cc. of orange juice. This may be repeated at intervals of one to two hours for perhaps six or eight hours until the acidosis disappears. However, the severely acidotic patient is likely to be vomiting, or if not vomiting, he may fail to absorb fluids from oral administration because of an acute dilatation of the stomach. In this instance it is advisable initially to give 1000 cc. of 10 per cent glucose solution in normal saline intravenously very slowly. This may be followed



by isotonic glucose solution subcutaneously or per rectum. When given subcutaneously, 5 per cent glucose in distilled water is ordinarily tolerated quite well. Repeated intravenous injections may then be alternated with subcutaneous administration if necessary. Here again it is advisable to administer with each two grams of glucose one unit of insulin, which may be given subcutaneously rather than intravenously in the average case. From one hundred to three hundred grams of glucose given in this fashion per twenty-four hours, depending upon the severity of the acidosis, is ordinarily sufficient. I prefer to give insulin in progressive doses rather than making an initial attempt to calculate the total insulin dosage needed to combat the acidosis. Progressive doses may be varied according to the urgency of the situation based upon repeated blood sugar determinations and urinalyses.

Too much parenteral fluid must be avoided in order not to embarrass the cardiovascular system, but at the same time sufficient quantity should be given to provide the kidneys with adequate output. Ordinarily a safe maximum intravenous limit should be 2000 cc. per twenty-four hours, while two or three thousand more may be given safely subcutaneously if absorbed properly.

The advantages of this method of therapy include simplicity to the point of usability without complicated laboratory procedures. It may be carried out in the home if necessary and controlled adequately by ordinary urinalyses for sugar and acetone.

If the patient presents an indication for immediate surgical treatment requiring general anesthesia, it is advisable to introduce at least 100 gr. of glucose into the patient before surgery and, if at all feasible, to achieve freedom from acetoneuria.

Following recovery from acidosis, the administration of large amounts of glucose for a few days is in order to help build up body stores of glycogen before rigorous regulation of the diabetes is begun. This helps avoid a period of instability which often follows acidosis and prolongs the time needed for regulation.

During the recovery period, a troublesome complication may be the retention of nitrogenous waste products in the blood. One of our patients who gave no history suggestive of previous renal disease developed fatal uremia. This complication has been previously described as an extrarenal azotemia, probably the result of electrolyte imbalance induced by diminished alkali reserve. Prompt restoration of electrolyte balance and uri-

nary output appears to be the best preventive of such nitrogen retention.

### Summary

1. Diabetic acidosis is an indication for emergency treatment.
2. Oral intake of glucose containing solutions or foods with subcutaneous administration of insulin will remedy mild acidosis.
3. Severe acidosis demands parenteral administration of glucose, fluids, and electrolytes with insulin given subcutaneously until the patient can resume oral intake.

### Discussions

*Fred Sternagel, M.D., West Des Moines:* Dr. Swanson has just presented a carefully thought out and well written resume for the treatment of diabetic acidosis, but unfortunately the time allotted to these papers does not permit mention of all the important principles of the treatment.

In my opinion, at least, no one can adequately treat diabetic acidosis or remember that treatment without keeping constantly in mind the present day conception of the pathogenesis of this disease, for upon this conception rests the rationale of treatment.

In this respect, the element sodium should receive first consideration, for it is much involved in the pathologic physiology of diabetic acidosis and is incidentally by far the most plentiful of all basic ions in the blood serum. Like all basic ions, it is capable of neutralizing acids, and in this capacity sodium acts like a little buggy carrying carbonic acid (carbon dioxide) from the tissues through the blood stream to the lungs where the carbon dioxide politely gets off the buggy.

The patient with diabetic acidosis is unable to produce enough insulin for the intermediary metabolism of carbohydrates which are the chief source of tissue energy. The body seeking nourishment then calls upon the fat in such amounts that it is incompletely burned to form an excess of beta-oxybutyric acid and aceto-acetic acid which among other substances are known as ketones.

These ketones are dangerous. They combine with sodium and are not readily detached. Eventually they are arrested by the kidneys and are eliminated along with the sodium. Sooner or later this produces a shortage of sodium so that there is not enough left in the circulation to carry all the carbon dioxide from the tissues to the lungs, and the patient will get among other symptoms those of carbon dioxide poisoning.

If you would like to know how many sodium ions still capable of carrying carbon dioxide are left in the patient, take a measured amount of this blood, mix it with a known volume of carbon dioxide in a closed tube, and the result will be the carbon dioxide combining power of the blood.

Knowing these facts, the treatment should be simple. First of all, give the patient enough insulin

so that he can utilize his available carbohydrate and prevent the further formation of the ketones from fat. After that make certain he has enough sodium ions in his circulation that are capable of carrying carbon dioxide and supply those ions if necessary in the form of some nontoxic sodium salt such as sodium bicarbonate, sodium lactate, or just plain sodium chloride, which seems most popular today. Of course he will need fluids and such other treatment as condition indicates to keep him alive in the meantime.

*Matthew T. Morton, M.D., Estherville:* The essayist has covered the treatment of diabetic acidosis and coma, and while not a new subject, it is one that needs reviewing frequently, especially by the average general practitioner of medicine.

Given a case of coma in a diabetic, the first thing is to determine whether one is confronted with diabetic coma or insulin shock. Dr. Joslin gives an excellent presentation in which he stresses twenty-four differential points in making this distinction, which are:

	Diabetic Coma	Insulin Shock
1. Onset	Slow—days	Sudden—minutes
2. Food	Too much	Insufficient
3. Insulin	Too little	Too much
4. Presence of infection	Frequent	None
5. Thirst	Extreme	Absent
6. Hunger	Absent	Frequent
7. Vomiting	Present (peritonitis ileus)	Absent
8. Pain in abdomen	Frequent	Absent
9. Fever	Frequent	Absent
10. Skin	Dry	Moist
11. Tremor	Absent	Frequent
12. Vision	Dim	Double
13. Eye balls	Soft	Normal
14. Appearance	Florida, extremely ill	Pallor, weak, faint
15. Respiration	Air hunger	About normal
16. Blood pressure	Fall	Rise
17. Mental state	Stupor, distressed, restless	Irritable, apprehensive, hysterical
18. Unconsciousness	Gradual approach	Sudden
19. Urine	Sugar present	Sugar absent in second specimen
20. Urine	Diabetic, acetone	Absent
21. Blood sugar	High usually	Low
22. Specific treatment	Insulin, salt, fluids	Carbohydrates
23. Response	Gradual	Hours
24. Convulsions	With alkalies only	Present

This is still an age of preventive medicine, and it is still applicable in this instance until the patient has developed diabetic coma. Prevention begins in the education of patient or parents regarding the symptoms of acidosis and those conditions under which it may occur.

For instance, diabetes adequately controlled may suddenly become an inadequately controlled patient with the advent of any infectious condition. In addition, a pruritus, carbuncle or furunculosis may be in turn a result of poor control. In other words, the patient on the advent of those episodes should have his diabetic condition investigated. Any of the ordinary childhood diseases in a diabetic child warrant examination preparatory to prevention of acidosis and coma. Especially is this true in those diseases where onset is accompanied by vomiting.

Irreversible pathologic and pathologic physiologic condition resulting from coma can only be cured by prevention, which requires alertness on the part of the physician, patient, and parents in the case of the juvenile diabetic, and their full co-operation.

Any comatose patient with short, mastoid type of breathing following disappearance of the classical Kussmaul type, softening of the eye balls, complete loss of reflexes and mottling of the dependent portions of the body, is a direct challenge to any physician who claims deaths from diabetic coma are inexcusable.

When patients are hard to keep under control, investigate for evidence of some obscure infection as in the teeth or tonsils.

Elliott P. Joslin states: "Keep the blood sugar and cholestrol constantly under 200 mgm., at all times." In other words, attempt to keep these constituents within physiologic limits.

## THROMBOSIS OF THE CAVERNOUS SINUSES

DeVoe O. Bovenmyer, M.D., Ottumwa

Septic thrombophlebitis of the cavernous sinuses, prior to the advent of modern chemotherapy, was almost invariably a fatal disease. While it is still one of the most fatal complications encountered in otolaryngology, it can be especially noted that the favorable reports in the literature have increased markedly the past few years.

MacNeal, Frisbee, and Blevins<sup>1</sup> have published a good anatomic description of these sinuses and their tributaries. "The two cavernous sinuses are 20 to 25 mm. in length, about 10 mm. in diameter, and situated one on each side of the sella turcica. The cavernous sinus is not a simple venous channel like other large dural sinuses. Instead, it is a mass of rather loose connective tissue enclosed in dura and containing in its substance the third, fourth, and sixth cranial nerves, the ophthalmic and maxillary divisions of the fifth nerve, the carotid artery, and a rich plexus of anastomosing venous channels. The venous plexus in the cavernous sinus receives the central vein of the retina and the superior and inferior ophthalmic veins, thus draining the eyeball, orbital tissues, the ethmoid tissues, and the eyelids. A large communication between the superior ophthalmic and the angular vein provides an important connection with the anterior facial vein and its anastomoses, devoid of valves. The venous channels of the two cavernous sinuses are connected by large anterior and posterior intercavernous venous channels which form a venous circle around the hypophysis cerebica. Posteriorly, the venous plexus is directly continuous with the carotid venous plexus, which receives veins from the middle ear, and terminates in the internal jugular vein. At the apex of the petrous bone the superior and in-

<sup>1</sup>Presented before the Ninety-fifth Annual Session, Iowa State Medical Society, Des. Moines, April 18 and 19, 1946.



terior petrosal sinuses extend from the posterior end of the cavernous plexus backward to the transverse sinus and to the jugular bulb, respectively."

Clotting of the blood in these channels is usually started by bacterial inflammation some place in the head or possibly in the neck. According to Lederer<sup>2</sup> and Grove,<sup>3</sup> the infection originates from four sources. The first is from anterior foci such as the lips, ala nasi, vestibule of the nose and the eyelids, spreading by way of the angular, supraorbital, and supratrochlear veins to the ophthalmic veins and thence to the cavernous sinus. Such infections usually result from picking, scratching, squeezing, or cutting a furuncle in these areas. The second is from internal foci such as the sinuses, turbinates and septum, occurring as the result of intranasal operations carried through the ethmoidal veins or through the wall of the sphenoid sinus. The third comes from inferior foci—that is, as the result of peritonsillar abscess, tonsillectomy, operations on the superior maxilla, and deep cervical abscess, spreading by way of the pterygoid plexus or by direct proximal extension of the internal jugular through the lateral sinus and petrosals. Finally, infections may come from the posterior foci such as the external or middle ear and mastoid by extension from the lateral sinus through the petrosals.

The clot in the sinus is likely to be infected at the time of its formation or will in most cases contain bacteria if the patient survives long enough. The infecting organism is usually the hemolytic streptococcus when the primary disease is otitis media, and Staphylococcus when the inciting lesion is a furuncle; pneumococcus and Pfeiffer's bacillus are sometimes encountered when the origin is in the nasal accessory sinuses or in the pharynx. These septic thrombi tend to extend into all connecting venous channels and to give off bacteria into the circulating blood. There is also a tendency of the infection to break through the walls of the thrombosed vessel setting up purulent inflammation of the surrounding structures. Hence, there may develop meningitis, brain abscess, osteomyelitis of the skull, orbital abscess, or epidural abscess as well as the septic foci induced by the associated bacteremia.

The symptoms represent a severe acute infection characterized by local and systemic phenomena. The local signs depend mainly on which focus is involved and the symptoms on whether or not the case has become septic in character. The diagnosis cannot always be made with certainty during the early course of the disease. To establish a

diagnosis Eagleton<sup>4</sup> proposed the following diagnostic criteria:

1. A known site of infection.
2. A blood stream infection.
3. Early signs of venous obstruction.
4. Involvement of the nerves in the sinus.
5. Neighborhood abscess of the soft parts.
6. Symptoms of complicating disease.

The symptoms<sup>3</sup> due to venous obstruction are exophthalmos, edema of the eyelids and bridge of the nose, chemosis of the bulbar conjunctiva, some edema of the retina, dilatation and tortuosity of the retinal veins, retinal hemorrhages, and at times papilledema.

The symptoms<sup>3</sup> due to involvement of the cranial nerves are ptosis, dilatation of the pupil, paralysis of the abducens nerve, restriction of the movements of the globe, loss of vision, pain in the region supplied by the ophthalmic branch of the fifth cranial nerve, and rarely trismus.

The symptoms<sup>3</sup> of sepsis are a fluctuating temperature, a rapid, small, and thready pulse, chills and sweats, frequently vomiting, delirium, and coma.

Therapeutic efforts have been varied, and the success of any particular procedure has, so far, not been frequent enough to establish it as a standard treatment. Surgical intervention by different procedures has been tried with some reports of recoveries, but for the most part the results have been poor. Likewise, Streptococcus and Staphylococcus sera and bacteriophage have been used with only a few recoveries.

Since the use of sulfonamide compounds and penicillin alone, together, or in combination with heparin there have been many reports of complete cures in the past few years. The use of heparin in conjunction with chemotherapeutic agents was suggested by Dr. Champ Lyons<sup>5</sup> of the Massachusetts General Hospital. It is thought that heparin should aid in preventing the spread of septic emboli and in stabilizing the clot. Heparin<sup>6</sup> has a distinct effect in preventing the coagulation of the blood. It is administered by a constant intravenous saline drip. Usually 1,000 units of heparin, i.e. 10 mg., is added to each cubic centimeter of saline solution. The saline and heparin is permitted to run into the patient's vein at such a rate that the clotting time of the patient's blood is maintained at the desired level. Scholl<sup>6</sup> maintained a clotting time of the blood at about ninety minutes as determined by the five-tube method, in three cases of cure that he reported in 1942.

Sulfathiazole and sulfadiazine seem to be the most effective sulfonamide compounds, but experimental evidence tends to indicate that sulfadiazine

should be the drug of selection of these compounds. Since penicillin has been used in this disease it is apparent that it is the treatment of choice in all cases. It may be given by intramuscular injections, continuous intravenous drip or into the spinal canal. Also, it should be used early in proper dosage and continued for at least two weeks after the temperature has reached normal to insure against exacerbations. I believe the tendency is to combine its use with the sulfonamides and heparin, but it is possible that future data will prove that penicillin is adequate when used alone.

### Report of Case

J. H., a boy aged 18 months, was brought to my office May 21, 1945, with the history that six days before a red area appeared on the skin of the right upper eyelid followed by marked swelling of the lid. After four days an abscess broke and bloody pus discharged between the lids. The mother stated that he had had three or four sties since he was born, but otherwise the past history was negative.

When I first saw him, he looked sick. The right upper lid was thick from bluish swelling and the eye was closed. Some pus presented between the lids. The other eye looked normal. Thinking I was dealing with a bad lid abscess, I sent the patient home with instructions to take  $2\frac{1}{2}$  gr. of sulfadiazine every four hours and to use hot applications.

May 23, 1945, the patient was admitted to the hospital with a provisional diagnosis of cavernous sinus thrombosis. On admission his temperature was 104.4; white cell count 16,400 with 71 polymorphonuclears, 16 lymphocytes and 13 mononuclears. His red blood count did not go below 3,930,000 during his time in the hospital. Blood cultures and spinal fluid examination were not done. Urinalysis was normal. On May 27 an incision was made into an abscess near his right wrist that contained grumous red brown material from which was grown gram negative diplococci. Later x-ray pictures showed osteomyelitis of the right ulna, which has cleared up without any surgical treatment to the bone. There was pronounced edema of both lids of the right eye and of the upper lid of the left eye with chemosis of the bulbar conjunctiva of each eye. There was bilateral proptosis, and each globe was immobile with dilated pupils. Fundus examination could not be done on account of swelling and ptosis of the right eye, but the left eye showed a normal optic nerve with dilated veins.

The treatment consisted of 20,000 units of peni-

cillin intramuscularly every three hours for seven days, then 10,000 units every three hours for ten days followed by 5,000 units every three hours for three days. Sulfadiazine ( $2\frac{1}{2}$  gr.) was given every four hours by mouth for thirteen days. He was given no heparin, no blood transfusions, and no antitoxin. His temperature started to recede by lysis after twenty-four hours in the hospital and was normal on the eleventh hospital day. He improved physically with the decrease in fever. The swelling of the lids and conjunctiva gradually left, and he slowly regained use of his extra ocular muscles, becoming able to raise his lids. He was discharged from the hospital twenty-four days after admission. Fundus examination since recovery reveals no pathology and he apparently has good vision. He came for observation Feb. 13, 1946, when he had a convergent alternating squint. Rotations of each eye were normal, pupils were round and equal, reacting to light. He is apparently normal physically and mentally.

### Summary

A case report is given of a boy age 18 months on whom was made a clinical diagnosis of septic cavernous sinus thrombosis from a lid abscess. This patient made a complete recovery with the use of penicillin intramuscularly and sulfadiazine by mouth.

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### Discussion

O. L. Thorburn, M.D., Ames: Dr. Bovenmyer has reviewed the anatomy of the cavernous sinuses, pointing out the various routes infection may take to reach these sinuses and cause thrombosis and picturing the clinical findings necessary to establish a diagnosis. He has also mentioned the high fatality we had all learned to expect prior to use of the sulfonamides and penicillin and has demonstrated by a typical case history in a young patient of his own what a wonderful recovery may be expected by the adequate use of penicillin alone.

I have no practical qualifications to discuss this subject since it has been my good fortune never to have had a case of cavernous sinus thrombosis. Like everyone in the ear, nose and throat field, though, I have had a thorough respect for the disease and a dread of ever encountering it. Now that we have



in penicillin a remedy that promises a fair percentage of cure (just what percentage we do not as yet know), that dread will not be so great. It will still be my hope, however, that I will see such cases in the prethrombosis stage and have a chance to use penicillin at that time, or that the general practitioner who sees most of these cases at their beginning will recognize the danger and give them adequate treatment so that cavernous sinus thrombosis will never have a chance to develop.

## THE TREATMENT OF CARDIAC EMERGENCIES

Herbert W. Rathe, M.D., Waverly\*

The occurrence of cardiac emergencies in general medical practice, fortunately, is not common. As interpreted by the laity and some of the medical profession, the majority of heart attacks are in reality not due to heart disease but are the result of other circulatory derangements or disease processes of the chest or upper abdomen. Most of the bonafide cardiac emergencies which we are called upon to treat are made emergency by the accompanying state of fear. I shall briefly call your attention to the conditions which may simulate a cardiac emergency. I will then take up the treatment of the true cardiac emergencies which are the result of abnormal heart action or of disease or injury of the myocardium.

### False Cardiac Emergencies

Vasovagal syncope in varying degree occurs in some persons whose vasomotor control is unstable. An attack may manifest itself by dizziness and faintness which may progress to unconsciousness. This is attributed to an abnormal reflex nervous mechanism which causes dilatation of the splanchnic vessels with a pooling of blood in this area. The venous return to the heart is then insufficient; there may be a bradycardia, the blood pressure falls, and there is cerebral anemia. These attacks may be brought on by a change in posture or an emotional upset. In a susceptible individual the accompanying fear will cause a chest pain of varying degree, and the interpretation will be that the patient has had a heart attack. It has been my experience that patients with a history of heart attacks occurring over a period of many years are suffering from this symptom complex.

Another circulatory phenomenon which has a much more serious implication is peripheral circulatory failure, commonly called shock. In this state, which is not completely understood, the

venous return to the heart is diminished, the venous pressure is low, and the cardiac output drops. This condition may be brought about by a cardiac emergency, but it may also be due to trauma, hemorrhage, toxemia, infection, a burn, or other serious disease processes.

To the modern heart conscious layman, chest pain of any variety indicates heart disease. Our duty, therefore, is to make a careful differential diagnosis of all chest pains. It is almost as difficult to treat a patient who mistakenly believes he has heart disease as it is to treat one who does have an organic heart lesion. The pain in the chest accompanying a severe anxiety state may be of such intensity as to simulate a cardiac emergency, particularly if the patient is heart conscious. Other noncardiac causes of severe chest pain which can easily be interpreted as cardiac in origin are acute pulmonary embolism, spontaneous pneumothorax, acute mediastinitis, dissecting aneurysm of the thoracic aorta, gallbladder colic, various types of diaphragmatic hernia, and perforation of any upper abdominal viscus.

### True Cardiac Emergencies

In most instances, disorders of the rate and rhythm of the heart can be classified as emergencies. Organic heart disease should be considered present except in those cases which prove to have premature contractions, paroxysmal auricular tachycardia or auricular fibrillation.

### Tachycardias

Auricular fibrillation may be paroxysmal or established. This abnormal rhythm is recognized by the absolute irregularity of the heart beat and a pulse deficit. It is best treated by the use of digitalis. The object of treatment is to slow the ventricular rate and to improve the efficiency of the heart muscle. When auricular fibrillation is established, normal rhythm seldom returns. The choice of the form of digitalis to be used depends upon individual preference. I prefer Powdered Leaf of Digitalis U. S. P. Providing the patient has not been taking digitalis prior to the emergency, I recommend from 20 to 30 grains during the first twenty-four hours. Following this, a maintenance daily dose should be given.

Auricular flutter may be permanent but is usually paroxysmal and is often a transitional state between auricular fibrillation and normal rhythm. This rhythm is very difficult to diagnose without an electrocardiogram. The treatment of choice is digitalization. When this is not effective, quinidine sulfate may be administered. When using this latter drug, taking frequent electrocardiograms

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\*From The Rohlf Memorial Clinic.

is advisable. The safest method is to use quinidine sulfate, 3 to 5 grains every four hours, until normal rhythm has been established. During and after this period, the maintenance dose of digitalis is continued.

Paroxysmal auricular tachycardia is usually not associated with organic heart disease, but if it persists over a period of several days, circulatory collapse may occur. This tachycardia is sudden in onset and offset, is of 160 or more beats per minute, and is regular in rhythm. The chief symptoms are consciousness of the rapid heart action and anxiety, although occasionally a patient will complain of indefinite precordial pain. If the paroxysm is of short duration, active treatment is not indicated. Many patients having this disorder have discovered that they can terminate an attack by holding their breath or changing their posture. The induction of vomiting will often be successful. In some instances, pressure on the carotid sinuses will be effective. In practicing this maneuver, one should massage first one side and then the other, holding the head extended away from the side where the pressure is being applied. If pressure on one side or the other does not slow the heart rate to normal, then pressure may be applied to both carotid sinuses simultaneously. Pressure applied to the eyeballs is recommended, but most patients object to the discomfort. When these mechanical methods are not successful, the use of drugs is indicated. Sedation sufficient to cause the patient to relax and sleep will usually terminate an attack. Quinidine sulfate, 5 grains every four hours, or digitalization may be indicated. If these forms of therapy do not restore the heart rate to normal, acetyl-beta-methyl-choline,  $\frac{1}{3}$  to  $\frac{3}{8}$  grains, may be given subcutaneously. The possibility of producing ventricular standstill must always be kept in mind when using this drug. To counteract this complication, always have at hand atropine sulfate, 1/50 grain, for intravenous administration.

Ventricular tachycardia usually occurs in paroxysms. It may follow myocardial infarction and is difficult to recognize clinically. One must rely upon the electrocardiogram for definite diagnosis. The drug of choice is quinidine sulfate, 5 to 15 grains every four hours. Smaller doses may be used after myocardial infarction for the prophylaxis of this type of tachycardia.

### Bradycardias

A slow heart rate is not infrequent in persons with unusual endurance such as distance runners. Unless one can find evidence of organic heart disease, a sinus bradycardia in which the heart

rate is under 60 beats a minute is usually considered normal.

The classical example of a bradycardia which can cause a cardiac emergency is the Stokes-Adams syndrome. The heart rate is usually below 40 beats a minute, and there is complete auriculoventricular dissociation. When the heart rate is reduced below this level, there is a tendency to ventricular asystole, which is followed by symptoms varying from syncope to convulsions. The recovery is often spontaneous; when it is not, epinephrine 1:1000 solution, minims 2 to 4, should be given subcutaneously at short intervals until the heart rate is more rapid. The drug of choice for the prophylaxis of this disorder is ephedrine sulfate,  $\frac{3}{8}$  grain, every four to six hours.

Another syndrome associated with bradycardia and syncope is that resulting from pressure on a sensitive carotid sinus. Ventricular standstill may occur as in the Stokes-Adams attacks, but the duration is short and recovery is spontaneous. These attacks can be reproduced by pressure on the carotid sinus. Small regular doses of atropine or belladonna and avoiding pressure on these areas will help prevent the attacks.

### Acute Heart Failure

Acute left ventricular failure is a common and distressing emergency. The patient usually has a sudden attack of dyspnea with orthopnea and cyanosis of varying degree which may or may not be accompanied by recognizable pulmonary edema. These attacks frequently occur at night and are often called cardiac asthma. The immediate treatment is to place the patient in a comfortable upright position and to administer morphine in ample doses. If available, oxygen, 10 to 20 liters a minute, should be given until the patient is relieved, when the amount can gradually be reduced. Aminophylline, 7.5 grains, given slowly by the intravenous route frequently gives relief. If acute pulmonary edema is also present, the use of a mercurial diuretic such as mercupurin or theophylline-salysrgan is indicated. It is best to give these drugs intravenously starting with a trial dose of 0.5 cc. and if this is well tolerated, 1.5 cc. after a short interval. Following this emergency treatment, active management of the underlying cardiac disease should be instituted. It is well to keep in mind that a coronary occlusion may manifest itself by acute left ventricular failure.

Acute cor pulmonale in which there is failure of the right ventricle is usually the result of a pulmonary embolism or other disease of the pulmonary circulation. It is recognized by the severe



dyspnea, cyanosis, distended neck veins, and often an enlarged, tender liver. In addition to the previously mentioned treatment of acute heart failure, a rapid venesection of a pint of blood will aid in relieving the strain on the right ventricle.

### Coronary Occlusion

The early relief of the pain accompanying coronary occlusion with myocardial infarction may be life saving. By relieving the pain, the shock which occurs with serious myocardial injury may be prevented or reduced, the patient quieted, and the work of the heart lessened. Morphine sulfate is the drug of choice and should be given in adequate doses. I prefer to give  $\frac{1}{4}$  grain intravenously as the initial dose to an average sized individual, repeating the dose in 15 minutes if the patient is not relieved of pain. The patient should be made comfortable in a semi-upright position. Oxygen therapy, 5 to 10 liters per minute, should be started as soon as possible and continued as indicated. Aminophylline, grs. 7.5, given slowly by the intravenous route may be of benefit; however, I have come to rely entirely on the use of morphine for the initial therapy. After the pain is relieved, morphine with atropine should be given at frequent intervals subcutaneously along with other sedatives, in sufficient amounts to keep the patient quiet and free from the fear and anxiety which accompanies these attacks.

### Cardiac Tamponade

As a result of either trauma or an inflammatory process, there may be an effusion into the pericardial sac. Severe pressure on the heart or cardiac tamponade is a possible complication of the pericardial effusion. The symptoms of cardiac tamponade are restlessness, dyspnea, and cyanosis; the signs are increase in the area of cardiac dullness with distant heart sounds, rapid heart rate, and pulmonary compression in the left lower lobe posteriorly. If after the use of oxygen and sedatives the cardiac embarrassment is not relieved and is severe, paracentesis of the pericardium should be carried out.

### Conclusions

A careful differentiation between false and true cardiac emergencies must be made before a patient is told he has had a heart attack. In addition to the treatment of the disorders of rate and rhythm, dyspnea, or distress, it is essential to eliminate fear and anxiety by the use of sedatives and reassurance. When available, oxygen should be used freely whether or not cyanosis is present. Following the emergency treatment, careful management should be outlined and pursued.

### Discussions

*R. N. Larimer, M.D., Sioux City:* Dr. Rathe has given a clear, concise and complete discussion of his subject. One hesitates to add more, but emphasis on some of the points which he has raised may be worth while.

As was well developed in the first part of the paper, there are many so-called cardiac emergencies which actually represent the symptoms of some extra-cardiac condition or in other cases, are no more than a part of a neurotic episode. Years ago Christian and others before him, emphasized that one must remember that a word or phrase used by a careless observer may so fix the idea of heart disease in the mind of a susceptible individual that many subsequent physicians cannot erase the fear of the disease. When these people have one of their apparent crises, they make themselves, their families and their physicians unhappy, and frequently little can be done for them. Unfortunately the development of organic disease may be ignored by the distraught physician who has heard the cry of "Wolf" many times during years of observation. One must always try to remain objective in the observation of such a patient when a change in the character of his story may be observed and proper attention given to it.

But there are true cardiac emergencies as Dr. Rathe emphasized. You will note when you read Dr. Rathe's paper that he has included all of the true cardiac emergencies. Both the late Dr. Fred M. Smith and Drew Luten have outlined types of cardiac emergencies. Each of these authors' classifications coincide with Dr. Rathe's with the exception that both authors include "some vascular accidents aside from coronary thrombosis." These might include embolic phenomena when associated with heart disease and at times, dissecting aneurysm. In general, the diagnosis of these conditions and their treatment are familiar to all of you. Luten included two other conditions which might in some instances call for prompt recognition and treatment. These are certain cases of angina of effort and some cases of coronary insufficiency. It is quite evident that these in the main do not add to the clinical pictures which the speaker has already presented. The embolic vascular crises may or may not be strictly cardiac in origin, but they can represent complications of heart disease and at least the physician should keep them in mind.

With the exception of cases of heart block, Dr. Rathe has emphasized the fact that the physician may be quite limited in methods of treatment and choice of drugs when the patient is first seen. Morphine is the one drug which may be used with value in almost every case. Relief from pain, improvement of the state of physical and psychic shock which probably are present and the obtaining of rest for the patient and his heart, will all follow promptly with the use of this drug. The fact that in some cases the patient does badly after but not because of morphine should not deter the physician from

using this valuable drug. In cardiac emergencies, there is no substitute for it.

The young men and some of those who are returned from the service may be somewhat critical of Dr. Rathe's recommendation of the use of digitalis leaf. Because of their more recent training, they may be more familiar with the value of digitalis glucosides. While much may be said for the use of glucosides, proper digitalis effect will result from digitalis leaf when it is used by a physician who understands it. In those very few cases of congestive failure when rapid digitalis effect is desired, it is well to remember that Ouabain (crystalline Strophanthin) given intravenously will produce the digitalis effect in as short a time as two hours, while six or more hours may be necessary for digitalis to become effective. Ouabain is valueless by mouth. Of the digitalis glucosides, it would seem that digitoxin will become more popular; it is as effective by mouth as by vein; its effect is as prolonged as is digitalis leaf and because it is a thousand times more potent than digitalis, it is absorbed more quickly. Like digitalis, the dose can be made flexible.

The physician who keeps in mind the possibilities mentioned by Dr. Rathe can usually make a rapid and accurate diagnosis at the bedside. Then proper and prompt use of emergency measures may be life-saving. If the patient can be carried through the first critical hours, then time can be used for the evaluation of the patient's condition and planning for his future regimen. The suggestions by Dr. Rathe apply both to the early period and later.

*Albert A. Schultz, M.D., Fort Dodge:* I am particularly impressed with this paper because Dr. Rathe has very properly emphasized the fact that a majority of so-called cardiac emergencies are not a result of organic heart disease, and that the nature of these emergencies can and should be properly explained to the patient.

As a result of the widespread publicity given sudden deaths from heart disease by the press and radio, the public is suffering from a mass cardiac fear neurosis, and any symptoms of sudden onset referable to the heart are invariably interpreted as a heart attack, engendering intense fear in the patient as well as the relatives. Unfortunately, very often the physician, on very little evidence, agrees with the patient with the result that one more cardiac neurotic is made. Too frequently I see patients come to the hospital by ambulance for a physical survey because of an alleged heart attack which occurred one or two months previously. They have been confined to bed all of this time, many of them taking digitalis, and during this confinement have become so saturated with fear that they are actually afraid to move in bed. These patients are most commonly middle-aged women whose chief complaint in the past has been nervousness, heart palpitation, indefinite pains in the cardiac region, and a continual tired feeling. They are very emotional, hypersensitive, and apparently are unable to cope with

the usual difficulties, grief, and worry common in the experience of everyone without having occasional nervous or vasomotor reactions.

Unfortunately for the doctor, their heart attacks quite frequently occur at night and are characterized by marked palpitation, distress in the cardiac region which very seldom has the characteristic radiation of coronary pain. It is usually referred to the axilla or back and is always associated with marked anxiety, nervousness, and occasionally a fainting spell. They obtain more relief from a hypodermic of sodium luminal than morphine and I think they obtain the most relief if the physician, after assuring himself by a careful history and examination that the patient's symptoms are on a basis of nervous instability, takes the time to explain that there is no danger of sudden death and that the symptoms referable to the heart are purely a result of nervous and vasomotor instability. Coronary disease, of course, must always be considered in the presence of chest distress, but in a patient with a coronary attack the pain is almost always in the anterior chest or epigastrium; if it radiates, it is referred upward to the neck, shoulder, and down the arm as a general rule. A drop in blood pressure can come from a vasovagal attack as well as from a coronary occlusion.

If there is any difficulty in making a differential diagnosis at the time of the first visit, then certainly the patient should not be told that he or she had a heart attack until thorough observation has made the diagnosis of organic heart disease certain.

Practically always when these patients are surveyed in the hospital, no evidence of organic heart disease can be found. The electrocardiogram is normal. X-ray shows the heart normal in size and position, and physical examination of the heart is negative. But it is quite difficult at times to convince the patient that no heart disease is present and that bed rest can and should be discontinued. They are very slow in regaining confidence in themselves and eliminating fear. The attending physician can do much for these people by spending some time in demonstrating to them the normal x-rays, electrocardiograms, and other findings.

Even in the presence of real cardiac emergency such as coronary thrombosis the usual measures for relieving pain and shock, as outlined by Dr. Rathe, should be supplemented by an attitude of confidence on the part of the physician. Here, too, reassurance and subduing fear of imminent death are very important.

Many of these people who have had a coronary thrombosis or are subject to anginal attacks present a real problem in management. Superimposed on their real cardiac condition they develop a cardiac fear neurosis, and it is very difficult to differentiate between symptoms arising from anxiety and from real heart symptoms. They all do better if they come to the physician's office at regular intervals for the necessary mental lift that it gives them.

I should like to say, finally, that no one should be



told that he has heart disease unless the diagnosis is certain, and in any event a daily dose of reassurance is equally as important in the treatment as digitalis or aminophyllin.

## MODERN ASPECTS OF THE TREATMENT OF TUBERCULOSIS

William M. Spear, M.D., Oakdale

Collapse therapy, the only important addition to the treatment of pulmonary tuberculosis since sanatoria were introduced more than fifty years ago, has revolutionized the management of phthisis. Collapse therapy offers a majority of tuberculous patients an excellent chance of becoming completely well. An era of hope as to the curability of active cavernous pulmonary tuberculosis has succeeded decades of resignation or false optimism of both physicians and patients during the years when the sanatorium regimen was their only weapon. As long as tuberculosis exists the sanatorium will remain as the indispensable foundation upon which surgical treatment is built. The sanatorium is as necessary to the success of surgery as surgery is to the success of the sanatorium. They are inseparable in the modern effective treatment of tuberculosis.

A great majority of sanatorium patients belong to the moderately advanced and far advanced stages of tuberculosis in which the death rate without surgery is shockingly high. As recently as ten years ago surgery was occasionally used by only a few sanatoria. Now it is used in 50 to 80 per cent of cases in most of the modern institutions for treating pulmonary tuberculosis. Every patient, whether he has a unilateral or bilateral, cavernous or noncavernous lesion, is considered as to the chance of his complete recovery being increased and the danger of complications being decreased by surgery. Sanatorium physicians are no longer waiting to learn if the unaided sanatorium regimen will fail before they consider surgery. They rightly look upon tuberculosis as too dangerous and unpredictable a disease to justify any but the most certainly effective initial treatment.

Great progress has been made in recent years in the technical phases of thoracic surgery. New operations have been introduced, operative technic has been greatly improved, the possibilities and limitations of the various operations and combinations of operations are better understood, with the result that surgery is being successfully applied

to a steadily increasing number of bilateral as well as unilateral cases.

In the last analysis, genuine success in the treatment of pulmonary tuberculosis must be measured by the permanent disappearance of tubercle bacilli from the sputum and the complete closure of pulmonary cavities, as well as by the return of the patient to a condition of health. The chief aim of collapse therapy operations is completely to close pulmonary cavities and to cause the disappearance of tubercle bacilli from the sputum, as well as to produce the healing of noncavernous lesions. If the simplest operation that offers a reasonable chance of closure of the cavity should fail to accomplish these results, a supplementary operation or operations should be used if not contraindicated.

Naturally the universal trend toward the use of surgery in cases of pulmonary tuberculosis has resulted in the belief that this condition is now a surgical disease. To this idea most sanatorium physicians would take definite exception. Pulmonary tuberculosis is not a surgical disease but is a medical disease which in numerous instances can be greatly helped by surgery. So while surgery has done much and will do more to reduce the mortality of tuberculosis, yet it is the prime aid to rest, adding physiological to physical rest and thus helping the inherent body resistance of the victim to overcome his disease. All of our collapse procedures aim to provide physiologic rest for the diseased organ by diminishing or eliminating its function of respiration. There is also a corresponding reduction of the vascular supply to the collapsed area with diminution of lymphatic drainage from the area. By these changes fibrosis and healing are stimulated and hematogenous spreads are decreased. Let us rely on surgery but let us not imagine that we are dealing with an essentially surgical disease. There is no excuse for collapsing the truly minimal case of tuberculosis. Bed rest will accomplish arrest of the disease and the complications of pneumothorax and all the other more radical surgical measures will be avoided. The tuberculous cavity is the surgical lesion of this disease, and from experience and clinical studies we know that the persistence of this lesion is ultimately synonymous with a hopeless prognosis, harboring as it does the ever present danger of endobronchial spread.

During the past two or three years self-styled scientific writers have surpassed themselves in beguiling the public with a fleeting succession of hopes for a quick and dramatic cure for tuberculosis. Usually these alleged "cures" depend on the discovery of a new "wonder" chemical or so-called protective vaccine. Chemicals and vaccines

are being experimented with but progress in this direction is slower and less certain than the laity is led to believe.

The chemical compounds of greatest promise are the sulfones. The two drugs that have received the greatest amount of study are promin and diasone. Clinically, promin is not considered to be a particularly potent curative agent against human tuberculosis. Diasone is not an ideal chemotherapeutic agent but may be useful as an adjunct to other treatments. At present interest has shifted from the sulfones to the antibiotics. Penicillin is ineffective against the tubercle bacillus, but another mold, streptomycin, is reported as having a bacteriostatic action.

Mention must be made of the inestimable value of the bronchoscope in the diagnosis and treatment of tuberculous tracheo-bronchitis, a condition which could not be recognized or accorded treatment prior to the use in the sanatorium of this instrument.

In conclusion may I again emphasize that the importance of rest in the general treatment of pulmonary tuberculosis is unimpaired by the more modern developments of collapse therapy. No plan of therapy which neglects bed rest at the onset and the carefully graduated stages of rest and resumed exercise throughout the course of the treatment can be expected to obtain the maximum benefit for each patient and the greatest percentage of recoveries among all those treated. The physician must first persuade the patient to accept with courage the necessity for a prolonged period of treatment. After the patient and the physician have together gained control of the disease the patient must be gradually reconditioned both mentally and physically to return to his community as an economic asset rather than a liability. Therefore treatment includes education of the patient in how to live and how to stay well.

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CONFERENCE  
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#### Abstract of the Clinical History

A male infant, 7 weeks old, was admitted to the wards of the Pediatrics Department May 16, 1946, with a reported complaint of vomiting and diarrhea for about one month. The patient was

normal at birth but nine days later developed rhinitis, a productive cough, diarrhea, and fever. A physician was called who prescribed a quarter tablet of one of the sulfonamide drugs every four hours for five doses. The temperature was reported to have been 101 F. A skin eruption developed which was considered to be due to sulfonamides. The vomiting and diarrhea continued. Four weeks later the condition of the patient became worse and the temperature rose to 104.6 F. The child was taken to a hospital and treated with blood transfusions and changes in the feeding formula. Five days before admission to the University Hospitals the right ear drum was incised and the administration of penicillin was begun.



Fig. 1. Appearance of the small bowel ulcers arranged along the line of mesenteric attachment.

The patient was found to be in a poor state of nutrition, weighing 8 pounds, 4 ounces. The elasticity of the skin was lost because of dehydration. General weakness was evident and the face had an anxious expression. The right external auditory meatus contained a small amount of dry blood. The tympanic membrane was lusterless and bulging. The left ear drum lacked normal luster but was not bulging. Signs were found in the left mid axilla which were interpreted as due to pneumonitis and pleurisy. The general muscular tone was poor.

Myringotomy was performed bilaterally and pus drained from both incisions. Culture of the pus from the right ear yielded *Escherichia coli*, *Staphylococcus albus*, and *Diplococcus pneumoniae*. No organisms were grown from the pus from the left ear. On May 17 a right antrotomy was performed, and on May 21 antrotomy was performed on the opposite side.

During the stay in the hospital the condition of the patient became progressively worse. There was a severe grade of acidosis which required large amounts of electrolyte solutions parenterally. Part of the time the patient received an acidified skim milk formula with 5 per cent Amigen solution. Death occurred on May 29, 1946.



## Laboratory Findings and Parenteral Therapy

Date	CO <sub>2</sub> Combining Power of Blood volumes	0.9% Sodium Chloride Soln. %	Parenteral Therapy				Blood Plasma c.c.
			5% Dextrose Soln. c.c.	1/6 Molar Sodium Lactate c.c.	Whole Blood c.c.		
5-16	.....	50	250			100	
5-17	..... 33, 27	133	157	133	100		
5-18	..... 41	33	91			100	
5-19	.....	30	200			100	
5-20	..... 24			243		100	
5-21	..... 39	200	75	125	100	100	
5-22	..... 54					100	
5-23	..... 29, 39	245	45	173		100	
5-24	..... 28	290	215	50	100	100	
5-25	.....	230	125	230	50	100	
5-26	..... 40	200	100	255	100		
5-27	..... 37, 52	50	125	100		100	
5-28	..... 78	20	145			100	
5-27	Blood chlorides 630 mg./100 c.c. (107 mEq./L.)						
	NPN 42 mg./100 c.c.						
	Plasma Potassium 13.6 mg./100 c.c. (3.5 mEq.)						
	Plasma Sodium 327 mg./100 c.c. (142 mEq.)						
5-28	Spinal Fluid sugar 110 mg./100 c.c.						
	Spinal Fluid protein 292 mg./100 c.c.						
	Urine	Hemoglobin Gm./100 c.c.	Erythrocytes cu. mm.	Leukocytes cu. mm.			
5-16	.....	12	4,090,000	24,200			
5-20	.....Negative						
5-21	.....Negative						
5-23	.....Negative	13		42,100			
5-27	.....	13		14,900			
5-17	Stool Culture: negative for Eberthella, Salmonella, and Shigella groups. Almost pure culture of alpha hemolytic Streptococci.						
5-23	Spinal fluid culture: No growth.						

## Summary of Necropsy Findings

The important lesions in this case were confined to the upper respiratory tract and the small bowel. Purulent crusts were present in both external ears. There was granulation tissue, exudate, and necrotic bone spicules in the middle ear cavities, mastoid antra, and mastoid cavities. The mastoids had been curetted and drained. The wounds were healing well except for small points of drainage in each side. There was no evidence of intracranial extension of the inflammatory process. The small bowel was distended with gas from the ligament of Treitz to a point 18 cm. proximal to the ileocecal valve. From this point distally the bowel was collapsed, although there was no obstruction to the lumen at any point. The mucosa of the distended portion of jejunum and ileum was marked by numerous areas of ulceration. These ulcers varied in diameter from a few millimeters to 1.5 centimeters. They were confined to the mesenteric side of the bowel. Their shape was not consistent from one ulcer to another. There were no marks on the serosal surface of the bowel external to the ulcers. The ulcer margins were raised and in some instances overhanging. Their bases were clean and granulating for the most part. The largest was covered with a layer of fibrin which was stained with bile and contained considerable purulent exudate. The ulcers extended into the submucosa and superficial muscu-

laris. The inflammatory reaction around them was relatively mild. Several "flask" shaped small abscesses in the submucosa were seen. These were filled with pus and necrotic debris. A very thorough search failed to disclose any specific organisms including *Entamoeba histolytica*. Cultures of the ulcer grew only large amounts of *Proteus vulgaris*. There were no organisms of the Eberthella, Salmonella, or Shigella groups. There was mild acute lymphadenitis of the mesenteric lymph nodes. The remainder of the bowel was normal.

## Necropsy Diagnosis

Otitis media, acute, suppurative, bilateral (*Escherichia coli*; *Staphylococcus albus*, and *Diplococcus Pneumoniae*)  
Mastoiditis, acute, suppurative, bilateral  
Mastoidectomy, bilateral, postoperative  
Enteritis, acute ulcerative, jejunum and ileum  
Pulmonary congestion and edema  
Mesenteric lymphadenitis

*Clinical Discussion, opened by Dr. M. L. Floyd (Pediatrics):*

Many cases of similar story had jelly-like material in the mastoid antrum. The practice then was to open both antra in case of intractable diarrhea when no other obvious focus could be found. This has been the common practice since 1925-27. Findings in the ear drum are confined to loss of luster. There is no bulging of the drum and no redness. In the surrounding canal the anterior superior canal wall may bulge.

*Dr. W. C. Huffman (Otolaryngology):* "Hidden mastoiditis" is a misnomer on two counts. First, it is very infrequently "hidden" except to casual inspection; secondly, the disease is more often only an inflammation of the mastoid antrum since the mastoid process and its cells do not begin to develop until after the first year of life. Probably the term "antritis" would be more applicable than "mastoiditis."

The disease with its accompanying severe diarrhea is most frequently seen between the ages of six and fourteen months. We usually see these patients at the request of the Department of Pediatrics, and they prove to be infants in whom no other cause can be found to account for the diarrhea. Postauricular inflammation and edema are often not seen, and x-ray examination of the mastoid areas in young infants is of little value, but careful examination will usually reveal a decreased luster and apparent thickening of the drum along with a bulging of the posterior canal wall in its postero-superior quadrant. This posterior canal wall bulging is due to the fact that the skin and subcutaneous tissues of the drum membrane are continuous with those of the external canal wall so that pus may dissect its way from the middle ear to a point beneath the periosteum of the external canal wall.

When the disease is suspected, immediate investi-

\*Darrow's Solution:

2 gm. KCl

3 gm. NaCl

500 cc H<sub>2</sub>O

250 cc 1/6 M Sod. Lactate

gation is indicated. Because of the thin cortical bone overlying the infant mastoid antrum, opening and drainage of the antrum is quickly and easily done with practically no damage to the child's general condition.

Experience has shown that when a severe diarrhea is due to infection in the mastoid antrum, a marked improvement may be expected in about twenty-four hours after operation.

*Dr. G. Stearns (Pediatrics):* Babies require much more fluid than adults. Forty-three per cent of the body fluid of the infant is extracellular. This means it is a very labile form. In the adult this figure is only 20 per cent. The kidney of the infant is far less efficient than in the adult. Conditions are unstable. Rapid and severe weight loss is therefore possible.

Gastric juice contains no bicarbonate, and much acid. Vomiting therefore produces alkalosis. Pancreatic juice is high in bicarbonate and is lost in diarrhea. Decrease in blood volume and blood protein occurs. Blood proteins are normally low in babies. Protein, fluid, electrolytes, base, and food must be supplied. Sodium bicarbonate may be given in 4 per cent solution. It must not be sterilized after the addition of the solute because the bicarbonate is converted to sodium carbonate by heat. One-sixth molar sodium lactate is the best method of supplying bicarbonate. The lactate is converted to bicarbonate after it is given. Glucose and plasma are given for their food value. There is intracellular fluid loss in severe cases. Potassium is lost from within the cell and is replaced by the sodium ion. Rehydration is possible only after the potassium is replaced and the sodium is released. Darrow's solution\* is used for this purpose. It cannot be given intravenously and cannot be given unless there is good circulation and good kidney function. It is given subcutaneously at a maximum rate of 8-10 cc. per kilogram per hour. The maximum amount to be given in any 24 hour period is 80 cc. per kilogram. It is not usually required if feeding by mouth is still possible.

*Dr. E. D. Warner (Pathology):* Is intracellular fluid loss present in this case?

*Dr. Stearns:* Yes. The serum potassium was low.

*Dr. Warner:* If the serum potassium level is below 5 milliequivalents, does that mean that intracellular fluid has been lost?

*Dr. Stearns:* Yes.

*Dr. Warner:* What has happened to the large number of these cases who used to die? We see many less on the autopsy service.

*Dr. P. C. Jeans (Pediatrics):* I do not know. There are fewer ear infections than previously. Vomiting and diarrhea caused by upper respiratory infection are relatively common in infants. In most such instances at the present time the gastrointestinal disturbance is not severe and recovery is to be expected. Some years ago babies came under care frequently with severe gastrointestinal disturbances caused by mastoiditis. In these cases the illness was

rapidly progressive and was associated with severe dehydration, acidosis and apparent intoxication. Death resulted within a few days unless the affected mastoid antra were drained. Subsequently, for a period of years none of this same type of diarrhea was observed. Chronic low grade infections of the mastoid antrum will show the same picture but to a less degree of severity. I have seen none in between these two extremes unless this case represents such an instance.

As to the cause of the ulcers in this case, isolated duodenal ulcers do occur in infants. They are usually silent, bloody stools being the only clue. They are usually seen in poorly nourished infants.

*Dr. Warner:* The duodenum was the only segment of the small bowel not involved in this case.

*Dr. E. D. Plass (Obstetrics and Gynecology):* I note that this child was given five or six times the volume of plasma that he originally had. Could this account for the dehydration?

*Dr. Stearns:* Plasma given intravenously is not kept in the blood stream. The protein is used for food protein. Plasma protein levels are not raised above normal by the giving of intravenous plasma.

*Dr. I. H. Borts (Public Health):* How long after death was the autopsy performed?

*Dr. Warner:* Three hours.

*Dr. H. R. Meyers (Neuro-Surgery):* Was the brain examined? Was the diencephalon carefully examined in relation to the intestinal ulcers?

*Dr. A. Sahs (Neurology):* The brain was examined. Nothing was found on gross examination. The diencephalon was not specially sectioned for microscopic lesions.

*Dr. Warner:* Does the distribution of these ulcers suggest a diencephalic lesion?

*Dr. Meyers:* No. I have seen duodenal ulcers with neoplasms of the diencephalon. I doubt that these would have been missed grossly.

*Dr. R. Jackson (Pediatrics):* What is the relationship of the incidence of this entity and the beginning of chemotherapy?

*Dr. Jeans:* This condition almost disappeared before sulfonamides and penicillin came into wide use. We have no satisfactory explanation of the former frequency of the condition and its subsequent non-occurrence.

*Dr. Jeans:* What is the cause of death in this case?

*Dr. Warner:* I cannot even explain why the child lived as long as it did. No specific immediate cause of death was found.

#### SPEAKERS BUREAU RADIO SCHEDULE

WOI—Wednesdays at 2:45 p. m.

WSUI—Thursdays at 2:45 p. m.

Des. 4-5 Tuberculosis

Leon J. Galinsky, M.D.

Dec. 11-12 Nephritis

Forest H. Coulson, M.D.

Dec. 18-19 Anesthesia

Florence D. Johnston, M.D.

Dec. 25-26 No program



# STATE DEPARTMENT OF HEALTH



## RENEWING THE STRUGGLE AGAINST TUBERCULOSIS

L. H. Flancher, M.D.,

Director—Division of Tuberculosis Control  
Iowa State Department of Health

The time is again here when we pause to contemplate what has been accomplished during the past year and what is planned for the future.

While much has been accomplished in the struggle against tuberculosis, we still have a long road to travel before this disease can be eradicated in our state. With the advent of new and modern x-ray equipment, it may be possible to accomplish this task sooner than could have been foreseen several years ago.

The finding of cases of tuberculosis alone will not accomplish the task. Patients with the disease, including the recalcitrant and uncooperative, must be treated, instructed and kept under supervision until arrested or cured. There have been many difficulties along this path due to present inadequate laws. The Iowa Tuberculosis Association in conjunction with the Iowa State Medical Society, has been working on a new Tuberculosis Bill during the current year. It is hoped that this bill will be passed when introduced in the next Legislature, thus making the mission considerably easier to carry out.

It is desired to acknowledge the wholehearted support of the medical profession, the efficient aid of the various official organizations and of the many volunteer workers in the tuberculosis associations in what has been done during the past year.

The work could not have gone forward without the help of the "Silent Assistant," the small Christmas Seal which appears on letters and Christmas packages during this period of the year. Our grateful thanks for this little Seal and for all that it means.

We wish all a Merry Christmas and a Happy Year . . . and urge all to buy Christmas Seals.

## CONTROVERSIAL ISSUES IN TUBERCULOSIS CONTROL\*

Herman E. Hilleboe, M.D.,

Medical Director, Chief,  
Tuberculosis Control Division  
U. S. Public Health Service

In the field of tuberculosis control there are many tools and methods about which there is considerable controversy. As in any field where the thinking is healthy and progressive, the variety of opinion is vigorously expressed and firmly held. In consequence, practice differs.

Among the most highly controversial problems, the use and importance of the tuberculin test is of first significance. In the diagnosis of tuberculosis and for mass surveys, the tuberculin dosage is in dispute. A high initial dose is used in some quarters, while a low dosage is employed in others. There is also great difference of opinion concerning the interpretation of tuberculin reactions. Similarly, the reading of tuberculous activity in the x-ray evidence of lesions has its champions, while opposing groups believe it impossible to read such activity on an x-ray film. These opposing groups also present contrary solutions to the problem of interpreting primary and reinfection tuberculosis from the x-ray film. Many specialists think we cannot perceive from the x-ray film whether a lesion is primary or reinfection. In spite of the extensive researches done in this field, many interpreters still classify cases principally on the evidence of x-ray films. Furthermore, there is some difference of opinion on the proper disposition of cases that have positive gastric lavage. The more advanced school of thought believes that such cases can be released from the sanatorium and that children with positive gastric findings can go to school.

There are other issues, such as the value of miniature films, the significance of BCG vaccination, and the immunity that may be given by a positive tuberculin reaction. These and many

\*Editorial, Public Health Reports, lxi:1561-1563 (November 1) 1946.

other differences of opinion need clarification. It is obvious that extensive research should go forward, so that unanimity of opinion may in future reinforce diagnosis.

Because it is basic in the control of tuberculosis, the importance of the tuberculin test should have first consideration. It must be clearly understood at the outset that mass radiography has not displaced the tuberculin test. Indeed, it must be stressed that there is greater need than ever for such testing. The tuberculin test is invaluable in detecting reactors to tuberculin among contacts; it permits more accurate differential diagnosis; and it provides sample checks of population groups at yearly intervals in order to arrive at variations in levels of infection. This determinant combined with the findings of mass radiography, which in many instances has resulted in the examination of a majority of the adults in entire communities, will be a precise tool for evaluating the tuberculosis problem in any area.

Some leading workers in tuberculosis control have utilized the results of tuberculin tests in only two categories—reactors and nonreactors. Others have criticized such usage by pointing out that there is a third group—converters; that is, persons who convert from nonreactor to reactor from one time to another.

Extensive researches among more than 15,000 student nurses in many areas throughout the country have led the Tuberculosis Control Division to conclude that the most critical time for the reactor is the first several years after the change from negative to positive. During these first years the body is fighting infection, and everything should be done to maintain high resistance. The Division is apprehensive of the apparent neglect of this critical period in the life of the converter. It is emphasized that the immediate postconversion period requires close follow-up in order to keep resistance at a high level. Also, it appears to be desirable to minimize exposure until the body has gained control of the infection and the danger of disease has lessened.

We do not yet know what is the ultimate effect of early massive exposure which does not result in immediately apparent tuberculosis. The later experience of the cohorts of those among whom there was a high mortality rate when young needs extensive study, and the tuberculin test is perhaps our most effective instrument in the discovery of such knowledge. We must institute a long-time life-table study of the converters at various ages. At the same time we must extend the use of tuberculin tests in conjunction with mass radiography, for the purpose of obtaining the infection rate in

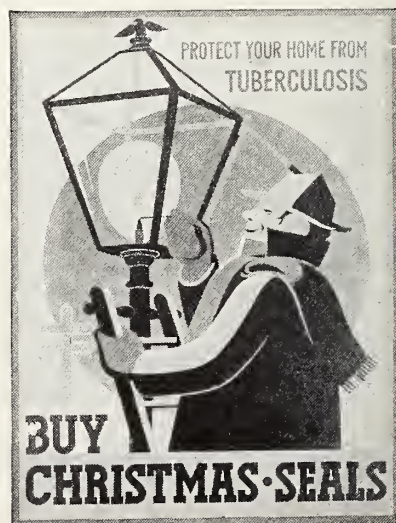
various age, race, and economic groups in the United States. The tuberculin test properly applied to random groups at regular intervals is a sensitive index to what is being accomplished by all other control methods now in use.

### THE ESTABLISHMENT AND USE OF FUNDAMENTAL PROCEDURES IN TUBERCULOSIS CONTROL

Of 2,979 children, from 6 to 14 years of age (in Minneapolis), who reacted to tuberculin at the time of the first examination, none gave a history of illness or became ill from the primary lesions. During this age period, extrathoracic lesions of the reinfection type were already present or became demonstrable in 36 instances, and chronic pulmonary tuberculosis of the reinfection type was present in 30. The majority of chronic pulmonary lesions was found in those between the ages of 12 and 14.

Of the many persons observed in the Minneapolis work, more than one thousand adults—mostly students of nursing and medicine—have developed primary tuberculosis while under observation. They have tolerated the first infection type of tuberculosis as well as have those infected in childhood; and moreover, they have not developed, subsequently, significant chronic reinfection type of tuberculosis to a greater degree than have those who entered the observation group as tuberculin reactors. The theory propounded in 1920, therefore—that a first infection postponed to adulthood is exceedingly hazardous—is untenable in Minneapolis.

\*Myers, J. A.: Public Health Reports, vi:1563-1583 (November 1) 1946.





# The JOURNAL of the Iowa State Medical Society

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## Rural Health Program in Iowa

A recent News Letter issued by the Council on Medical Services of the American Medical Association is headed, "Success of Hill-Burton Program Depends on State Action."

We, as a profession, have generally approved the bill. It provides for federal aid toward planning and construction of health and diagnostic centers and hospitals throughout the country. These are to be built only after careful surveys have determined the areas where greatest need exists. Machinery is being set up to carry out the provisions of the law, and it will soon be time for definite action in Iowa to carry out our part of the program.

The Hill-Burton Law, as enacted, has many good features. Each state must make a complete survey of its existing hospital and health facilities and the need for further development. Included in the decision as to hospital needs will be not only the lack of hospitals in a community but also the ability of that community to financially support the hospital and the availability of properly trained medical personnel to man the hospital.

Iowa has several areas which lack both hospital facilities and public health organizations. In anticipation of the passage of the bill the Governor of Iowa appointed a Hospital Survey Commission, which has already largely completed its work. Soon we will have the report of this commission, which will include recommendations as to the communities in which hospitals and health centers could and should be built under the provisions of

the Hill-Burton Law. When this is available, the medical profession of the state should get behind the decisions made and do all possible to see that Iowa gets medical facilities where they are most needed.

The Surgeon General of the United States Public Health Service is in charge of the administration of the law. The law sets up a Hospital Council, which advises the Surgeon General as to carrying out the provisions of it. Although the farm organizations, hospital organizations and the American Medical Association worked for the enactment of the law, no official representative of any of these organizations is on the Hospital Council. In addition to this council there is an Advisory Committee on which the American Medical Association is represented by two members. The Hospital Council and Advisory Committee have held their first meetings and are rapidly preparing to put the hospital survey and construction act into practice.

Local projects must be approved by the commission appointed by the state for that purpose. The need in the individual community must have been recognized by the hospital survey commission, and it must be determined that the community is financially able to support the hospital. It must also be determined that there are professional men available to staff the Hospital. Very fortunately the decisions as to location seem to have been taken out of the hands of politics. There will be little opportunity for log rolling or pork barrel methods to be used.

When a project is approved and finished, the Federal Government steps out of the picture. The law definitely states that when construction is finished none of the various federal agencies which have been involved to that point shall have any control over the future conduct of the hospital or health center. This is in line with one of the primary contentions of the medical profession—that control should be on a local level.

It would be well for the various county societies to emulate the State Society, appoint committees to study the problem, and be ready to act when the law is finally put into definite action. The county societies should:

1. Study the provisions of the Hill-Burton Law. Copies are available, and an interpretation is being prepared which will be sent to counties which so desire.
2. Follow the *Journal of the American Medical Association* for reports and analyses of the Washington conferences on the Hill-Burton Law.
3. Study carefully any state legislation which

may be proposed to allow Iowa to participate in federal aid under this law.

4. Make plans in cooperation with farm, labor, and other groups.

This is fundamentally a medical problem. It is a development in which organized medicine should take the lead, providing for the best possible use of the funds available to improve the health and medical services to the people of Iowa.

### Nursing Problems in Iowa

Iowa is faced with a shortage of graduate nurses which amounts at the present time to 30 per cent in institutions and 25 per cent in public health. This shortage is the result of far-reaching events in nursing and nursing education caused by the war, the splendid response of nurses to both military and civilian needs, the national organization of nursing for coordinated planning, and the rapid and effective response of schools of nursing to radical changes in curricula. It is well realized that the good old days when the services of a graduate nurse were readily obtained will probably never return.

A recent study by the Raymond Rich Association on the structure of organized nursing has been published in the October, 1946, issue of the *American Journal of Nursing*. This report stresses the fact that there is a need for the development and enforcement of optimum standards in the recruitment, preparation, and practice of the nursing profession. The social and economic welfare of qualified nurses needs to be promoted and protected. To fulfill its public trust, organized nursing is primarily dedicated to achieve the goal wherein the community as a whole and every individual in that community will receive the proper kind and amount of qualified nursing service required to build, maintain, or restore optimum health. The report recommended that the present six nursing organizations (American Nurses' Association, National League of Nursing Education, National Organization for Public Health Nursing, American Association of Industrial Nurses, National Association of Colored Graduate Nurses, and the Association of Collegiate Schools of Nursing) should be consolidated into one national body, preferably a national academy of nurses. Such a body could obviously accomplish a maximum effect in furthering the aims of organized nursing.

The concept of a graduate professional nurse is most exacting. The National League of Nursing Education committee on grading of nursing schools believes that a graduate nurse should: (1)

be able to give expert bedside care; (2) have such knowledge of the household arts to deal effectively with domestic emergencies arising out of illness; (3) be able to observe and interpret the physical manifestations of her patient's condition in the light of social and environmental factors acting to hasten or delay recovery; (4) possess a specific knowledge and skill required in dealing effectively with situations peculiar to certain common types of illness; (5) take part in promotion of health and prevention of disease; (6) possess the essential knowledge and ability to teach measures to conserve health and to restore health; (7) be able to cooperate effectively with the family, hospital personnel, and health and social agencies in the interest of the patient and community.

In view of these requirements it is obvious that the state of Iowa is unable to obtain the services of sufficient professional nurses meeting these standards to give proper nursing care to the various communities of the state. As a result, an attempt will be made to obtain necessary legislation legalizing the training and licensure of "trained" practical nurses. If in certain cases duties such as cleaning the room, bathing the patient, taking the temperature, and serving diets can be carried on by a non-professional person in such a way as to assist the patient to regain and maintain health, such activities should be assigned to those who can do them at the lowest cost commensurate with good results. There is no question but that properly accredited schools can be maintained to train practical nurses for these functions in Iowa. The value of such trained assistants was proved during the war by nurses' aids recruited from the community. The question of when a given nursing activity should be performed by a qualified nurse and when it may be assigned to another person is one that can be decided only by the professional nurse who carries responsibility for the nursing situation as a whole and who understands the conditions present as well as what nursing objectives are to be accomplished in a given situation.

The three groups particularly active in Iowa are the National League of Nursing Education, the National Organization for Public Health Nursing, and the American Nurses' Association. The Iowa State Association of Registered Nurses is made up of eleven district associations. The American Red Cross Nursing Service assists during emergencies or disasters by maintaining an active enrollment of registered nurses on a national and state basis.

Physicians of Iowa are called upon to assist organized nursing in many ways. Particularly important at this time is the recruitment of student



nurses. Interprofessional relationships can be improved if physicians will desist from browbeating nurses and issuing unnecessary orders in hospitals. By utilizing the lines of authority in a hospital nursing staff, the physician is urged to correct unhappy or poor nursing service by appealing directly to the director in charge of the nursing service. Physicians also may take part in the proper education of nurses through lectures emphasizing nursing responsibility and by private counseling on wards, floors, and at the bedside. Nurses like physicians need many opportunities and much provision for continuous growth. The time has come for physicians to assist organized nursing to obtain an adequate income without placing nursing care outside the limits of a patient's ability to pay. Physicians who actively participate in nursing education will be invited to join the National League of Nursing Education, thereby receiving an active voice in planning for the education of the nurse.

These problems are all vital to organized nursing at this time. It behooves the physicians of Iowa to do all in their power to assist the nurses in their constructive effort to keep pace with the rapidly accelerated demand for proper nursing care to the individual and the community.

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#### Veterans Questionnaire

Surely there is no member of the medical profession who served overseas in any branch of the military service who has not been tempted to write a letter to the Surgeon General explaining some unhappy condition connected with his tour of duty. At long last an opportunity is at hand for each service physician to express his own ideas regarding mobilization of physicians for duty during a national emergency.

The American Medical Association will soon mail a postwar questionnaire which has been prepared by the National Emergency Medical Service Committee to more than 45,000 discharged medical officers of World War II. This questionnaire deals with such factors as type of service, training, assignments, and professional skills. There is, in addition, a space for suitable remarks, and further elaboration of gripes, either here or in a letter, is welcomed.

The futility of an individual letter "forwarded through official channels" is well known to anyone who has seen active duty. If sufficient questionnaires are returned, however, the American Medical Association, through its National Emergency Service Committee, should have such a wealth of information that definite constructive criticism may

be furnished each Surgeon General in such a manner as to improve medical service in any future national emergency. All medical officers are urged to take the necessary time to complete the questionnaire promptly following its arrival, expressing frankly and completely their reactions to military service, for it is hoped that the information derived by this method will serve as a useful guide in preparing for any new national emergency.

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#### North Central Medical Conference

The North Central Medical Conference met in St. Paul, Minn., November 10, in conjunction with a regional meeting of the Council on Medical Service of the American Medical Association. About seventy physicians from Wisconsin, North and South Dakota, Nebraska, Minnesota, and Iowa were present.

Dr. J. D. McCarthy of Omaha, president of the group, presented an excellent paper on "The American Medical Association as an Instrument to Advance the Ideals of American Medicine." He quoted the Constitution of the American Medical Association which says, "The objects of the Association are to promote the science and art of medicine and the betterment of public health." He then mentioned the trend toward government medicine in the last twenty-five years, the formation of the National Physicians Committee, the establishment of the Council on Medical Service and Public Relations, and the streamlining and harmonizing of the constitution and by-laws of the Association in conformity with the times. He quoted the definition of the word instrument, saying it was that by means of which any work is performed or result is effected, and declared that in his opinion the American Medical Association was the proper organization and channel to be utilized. He decried the establishment of new societies and groups presenting personal beliefs and opinions, and said the constitution was sufficiently liberal to permit the American Medical Association to do the work necessary to achieve its objectives. He ended his talk by saying that in the sixteen years of its existence the North Central Conference had always been constructive and in favor of using the American Medical Association proper rather than special groups to forward the ideals of medicine.

Mr. Thomas A. Hendricks, Secretary of the Council on Medical Service of the American Medical Association, followed Dr. McCarthy. His talk was on public relations of the Association. He praised the work of the North Central Conference, acknowledging that it had initiated the effort to

create the Council on Medical Service and Public Relations. He mentioned the constructive approach of the Conference, its informal round-table discussions, and its work in liberalizing the American Medical Association. He told of the Rich report which was published in part in the September 28 issue of the *Journal of the American Medical Association*.

Although the last House of Delegates removed public relations from the sphere of the Council, the Council still performs a great deal of public relations because, in the final analysis, this depends on professional relations. Every physician in the United States has a part, and the Council is trying to help every physician in his professional relations by the news letters, which are based on the principles of informality and information. A Speakers Bureau is also being established for the purpose of training physicians in how to present medicine's story to the public. A booklet entitled "Voluntary Health Insurance vs. Compulsory Sickness Insurance" has been prepared for use in national high school debate contests.

Going on to other matters, Mr. Hendricks told of the cooperative movement, mentioning the Two Harbors meeting in August as a definite step toward consumer control of medical practice. He said that the November election gave the medical profession a breathing spell and an opportunity to prepare a good offensive. Senator Taft plans to re-introduce his bill in the coming session and will welcome suggestions. Labor influence will continue, though possibly under different leaders. He said a back-to-normal program is not enough, but an all-out, intense, well directed local organization actively functioning is necessary.

Mr. Hendricks ended his talk by telling of a visit he had made to a museum in Wyoming where there was a collection of branding irons. He said that, tenderfoot as he was, he could see that one iron was particularly awkward and clumsy. Upon asking about it, he was told that it had been designed by some federal bureau and that it was, as he felt, poorly designed—so poorly that many of the cattle upon whom it had been used suffered an infection from the branding and died. He asked if medicine might not suffer the same fate at the hands of some federal bureau.

Mr. L. W. Larson of Bismarck, N. D., discussed medical care in rural areas. He told of the formation of the Committee on Rural Health Services and mentioned that all state societies have been asked to appoint a similar committee. The first rural health conference was held in Chicago in February, 1946, in an effort to coordinate the efforts of all groups interested in rural health.

Two things to be considered are the availability of medical care and its cost. How can the problem be solved? It will take a free and honest appraisal of what is wrong, as well as what can be done and how, to correct it. A study of the distribution of physicians, hospitals, and public health facilities should be made; the benefits of prepaid medical care should be extended to the rural groups; and hospital construction should be encouraged where possible.

Dr. Larson said the medical profession and the farm groups are in agreement on common objectives. The Farm Bureau is opposed to compulsory health insurance; the Farmers Union wants it. He told of the workshop held in North Dakota on sanitation and housing, public health, medical facilities and personnel, and insurance for medical care. Most of the experts at the workshop were federal employees, and all of them represented the consumer viewpoint. They favored consumer control aided and abetted by federal help.

Mr. J. W. Holloway said the Hill-Burton bill was the most important piece of legislation in the 79th Congress. Twenty-eight states have enacted legislation designating the agency to participate in this program. The bill brings up the possibility of state hospital licensure laws. A draft of a uniform national law for this has been drawn for the second time and will be submitted to the states for consideration. The Hill-Burton bill does not require licensure, but does demand the setting up of minimum standards.

Mr. Holloway also discussed cancer bills which were considered by the Congress, the Pepper bill, and the Taft bill. He agreed with Mr. Hendricks that the Taft bill would be re-introduced and that Senator Taft was anxious for suggestions.

Dr. E. J. McCormick of Toledo opened the afternoon program by telling of the work of the Council on Medical Service. He stressed that the American Medical Association needed cooperation and understanding rather than destructive criticism. A democratic organization is bound to make mistakes. The recent election does not remove the thread of government medicine but merely provides a breathing spell.

Medicine has received the worst press of any profession. The Two Harbor, North Dakota, and the Purdue meetings were filled with untruths. The American Medical Association has enough unjustified criticism to face without having to take it from the medical profession. He called for understanding and a united front against criticism from the outside.

He discussed the formation of the Council, its early days, and the present set-up. Prepayment



medical care plans have gained a great momentum, having 4,063,000 persons enrolled September 1, an increase of 45 per cent since January. Blue Cross has 24,000,000 subscribers. There are 51 medical care plans run by medical groups with 75,000 doctors enrolled. Michigan Medical Service covers 875,000 persons; United Medical Service of New York, 496,822 persons; and Massachusetts Medical Service, 405,394 persons. Thirty states had working plans September 1, and only three had no plans. The question of federal domination of medicine can be solved by the expansion of medical care plans. The problem is not a personal one but one affecting all American citizens.

Dr. A. W. Adson of Rochester discussed prepayment medical care plans, saying the strike clause in most labor contracts will undoubtedly include medical care. He told of the service available through the Council bureaus and of the specific advice which can be obtained on details of plans. He said the seal of approval will be given to plans sponsored by doctors, but that when such a plan utilizes the service of an old line insurance company, the commercial company will not be allowed to use the seal on its policies or material. All of the old line companies are conscious of the great field of medical insurance and are anxious both to compete and to cooperate.

Dr. Carl M. Peterson of the American Medical Association discussed the United Mine Workers Health Fund. He told of meetings held with the UMW and said the trend is to include health provisions in all union contracts. The UMW requested a new safety code for miners, asking that certain phases of workmen's compensation procedure be made a mandatory thing for employers, that they comply with certain standards, that a reassignment of funds from the check-off be made, and that a medical survey of coal fields be made. This latter job was assigned to the Navy, and a team of Navy physicians held a series of conferences in which representatives of the American Medical Association participated. First they met with the mine physicians, later participating in a general discussion in West Virginia, followed by a series of conferences in Washington. The mine group asked about contract practice and the feasibility of prepayment plans.

Medical care for the veteran was discussed by Dr. G. D. Williams of Washington. Sixteen million veterans were potential patients January 1; the final figure will be about twenty million. These numbers necessitate the utilization of a great number of physicians and hospital facilities outside the Veterans Administration proper. Fifty-two

medical schools are cooperating in a resident training program. Contracts have been made with 28 state medical organizations or service plans, and 13 others are being negotiated. Veterans Administration hospitals and outpatient services will be utilized as fully as possible, but civilian hospitals and doctors will still be needed. Dr. Williams said there would be a tendency for the Veterans Administration to use the outpatient service for examinations and to assign treatment to the civilian physicians.

He mentioned that the new uniform fee schedule listed all procedures, and suggested that eventually a unit system basis might be used instead of certain amounts of money being specified for each procedure.

Dr. Herman E. Hilleboe of Washington gave the final paper, explaining the hospital survey and construction program authorized by the Hill-Burton bill. The purpose of the bill is to provide better health facilities, for many health centers are adversely located and poorly equipped. The bill provides for planning and construction with the local community providing two dollars for every one dollar of federal money. Plans must meet certain specifications and hospitals certain standards. The money may be used for construction and equipment, but none will be available for maintenance. The state agency will have a great deal to say about the location of hospitals, and the basis of need, along with ability to support, will be the determining factors.

Dr. William Duncan of Webster, S. D., president-elect, assumed the president's chair at the conclusion of the meeting. Dr. A. W. Adson of Rochester, Minn., was named president-elect; Mr. R. R. Rosell of St. Paul was elected secretary-treasurer; and St. Paul was chosen for the 1947 meeting place.

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### Early Diagnosis of Cancer\*

It is nearly twenty years since Papanicolaou discovered, in the course of his studies of the cellular content of the vaginal smear, that it is possible to recognize a malignant cell. He also showed that it is possible to demonstrate not only well established but cytologic changes which would lead to a reliable diagnosis for early recognition of malignancy of the female genital tracts.

The usefulness of the Papanicolaou technic has, in the last few years, been extended to early cytologic diagnosis of malignant changes by the examination of sputum, gastric washings, and sedi-

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\*Papanicolaou and Traut: *Diagnosis of Uterine Cancer by the Vaginal Smear*. Commonwealth Fund, New York, 1943.

ment of urine. This work has been done not only by the original workers but by Meigs, Trout, and others. It is now being carried on by some of the staff of the Department of Obstetrics and Gynecology, State University Hospitals, Iowa City, and at Broadlawns, Polk County Hospital, Des Moines. It is also interesting to note that Papanicolaou will discuss his method before the Conference on Gastro-intestinal Cancer sponsored by the United States Public Health Service in Chicago on December 5 and 6 and Dr. Rakoff is going to address the Radiological Society of North America by invitation in Chicago December 6 on the subject, "Endocrine Factors in Diagnosis of Pelvic Tumors by the Papanicolaou Method."

This method, while it has not as yet had universal acceptance, does have great promise as a very useful and reliable diagnostic aid. It will be necessary for cytologists and pathologists to gain experience in interpretation of cellular changes, but when this is accomplished it will probably permit a much earlier diagnosis of malignancy, which in turn will make for more effective treatment.

#### NO CONFERENCE

No Physicians Monthly Clinical Conference sponsored by the College of Medicine of the State University of Iowa will be held in December, January, and February. The next conference will be March 24, 1947, notices for which will be sent one week preceding that date.

#### CLINICAL CONGRESS OF AMERICAN COLLEGE OF SURGEONS

The five-day Clinical Congress of the American College of Surgeons will open in Cleveland on Monday morning, Dec. 16, at 9:30 o'clock. This will be the first annual meeting of the College since

1941. Headquarters will be in the Cleveland Public Auditorium and the Statler and Cleveland hotels, with most of the sessions, except the clinics at the hospitals, being held in the auditorium. The program will include operative and nonoperative clinics, demonstrations, symposia, panel discussions, forums, medical motion pictures, exhibits, and the Twenty-fifth Annual Hospital Standardization Conference which will convene during the first four days.

Dr. W. Edward Gallie of Toronto, president of the College, will preside at the opening meeting. Dr. Irvin Abell, chairman of the Board of Regents, will report on the progress of the 1946 Hospital Standardization survey. An address on "Maintaining Our Voluntary Hospital System" will be given by the Right Reverend Monsignor Maurice F. Griffin of Cleveland. Dr. Arthur C. Bachmeyer of Chicago, Director of Study, Commission on Hospital Care, will present "Pertinent Findings from the National Survey by the Commission on Hospital Care." The program will conclude with a discussion of the nursing problem by Dr. Howard C. Naffziger of San Francisco, chairman of the Committee on Nursing, American Surgical Association, who will present the surgeon's viewpoint; by Dr. Robin C. Buerki of Philadelphia, director, University Hospitals, and Dean of the Graduate School of Medicine, University of Pennsylvania, who will present the hospital administrator's viewpoint; and by Lucille Petry of Washington, director of the Division of Nursing, United States Public Health Service, who will present the nurse's viewpoint.

The Presidential Meeting will be held on Monday evening in the Music Hall of the Auditorium. The address of welcome will be given by Dr. Thomas E. Jones, chairman of the Cleveland Committee on Arrangements. Dr. Gallie will deliver the presidential address on the subject "Ideals in Surgery." An inaugural ceremony will be held for the incoming officers: president, Dr. Irvin Abell of Louisville; first vice president, Dr. Leland S. McKittrick of Boston; second vice president, Dr. F. Phinzy Calhoun of Atlanta. The first Martin Memorial Lecture will be given by Dr. Edward D. Churchill of Boston.

#### MORBIDITY REPORT

Disease	Oct. '46	Sept. '45	Oct. '45	Most Cases Reported From
Diphtheria	17	8	16	Cedar and Wapello
Scarlet Fever	72	53	162	Linn
Typhoid Fever	7	3	1	Jasper
Smallpox	0	0	0	.....
Measles	5	26	10	Johnson
Whooping Cough	34	69	11	Black Hawk, Delaware, Linn
Brucellosis	140	9	17	Delayed Reports—Scattered
Chickenpox	69	17	79	Bremer, Dubuque, Johnson
German Measles	2	0	0	Dubuque, Story
Influenza	0	0	3	.....
Malaria	8	7	33	Scattered
Meningococcus Meningitis	14	5	3	Scott (Davenport), Marion
Mumps	36	18	53	Linn, Madison, Winneshiek
Pneumonia	57	*485	10	Cass, Linn, Story
Poliomyelitis	117	132	101	Lyon, Scott, Polk, Woodbury
Tuberculosis	93	90	48	Polk and Mills
Gonorrhea	134	180	264	For the State
Syphilis	113	138	105	For the State

\*Delayed Reports.



# THE JOURNAL

of the

## IOWA STATE MEDICAL SOCIETY

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# VETERANS ADMINISTRATION

## Function of Civilian Physicians in Veterans Administration Medical Program

In order to clarify the status of civilian physicians working on a fee basis under contracts between Veterans Administration and state medical service organizations or under agreements between the Veterans Administration and state medical associations, the following instructions are issued:

The facilities of Veterans Administration field stations staffed by Department of Medicine and Surgery personnel will be utilized to their fullest extent for examinations and for outpatient treatment.

When in the opinion of the Branch Deputy Administrator, the backlog of physical examinations justifies, or when, in his opinion, outpatient treatment is not being rendered expeditiously, he will direct the regional offices under his jurisdiction to utilize the services of civilian physicians working under statewide contracts or agreements to clear the backlog or to expedite outpatient treatment.

When determining whether a veteran, residing either in a rural area or in a metropolitan area where a Veterans Administration field station is available, is to be referred to a Veterans Administration field station or to a civilian physician, consideration will be given as to which procedure will be to the best interests of the veteran and the government. As stated in paragraph one, above, the available medical facilities of field stations must be utilized to their fullest extent. This does not require that a veteran arbitrarily be ordered to a field station for examination or outpatient treatment; if a veteran establishes to the satisfaction of the Chief Medical Officer of a regional office (or of his designate) that reporting to a field station would work unnecessary physical hardship or cause excessive loss of time from employment, fee-basis designates working under statewide contracts or agreements may be utilized for performing examinations or outpatient treatment.

Male veterans may be admitted to private hospitals (preferably those under contract by the Veterans Administration) for inpatient treatment of service-connected disabilities by civilian physicians working under state-wide contracts or agreements if their physical condition is such as to constitute an emergency which cannot be met by a Veterans Administration hospital because of un-

availability of beds or because the emergent condition precludes travel. Prior authorization to effect private hospitalization and treatment by a civilian physician must be obtained. Such authorization may be obtained by letter, telephone, or telegraph. If owing to the extreme emergency of the case, prior authorization is not obtained, the physician or the admitting hospital should notify the Veterans Administration within seventy-two hours of the veteran's admission to the hospital. This notification will be considered as the basis of a prior authorization. If the facts of the case so warrant, the Veterans Administration will then issue authority for the veteran's private hospitalization and inpatient treatment by the civilian physician.

Female veterans may be admitted to private hospitals (preferably those under contract by the Veterans Administration) for inpatient treatment of both service-connected and non-service-connected disabilities by civilian physicians working under statewide agreements if the physical condition of the female veteran is such as to constitute an emergency which cannot be met by a Veterans Administration hospital because of unavailability of beds or because the emergent condition precludes travel. Authorization for such hospitalization and treatment must be obtained exactly as in the case of male veterans.

## Iowa Contract Acceptable

The State Society has received word from Dr. Donald McCarthy of Branch No. 8 of the Veterans Administration that Part One of the contract submitted is acceptable to the Veterans Administration. Part One deals with examinations for rating purposes for the most part, and its acceptance should enable the physicians in Iowa to aid in clearing the backlog of rating examinations now pending.

Further instructions are expected from the Veterans Administration in the near future, as well as acceptance of Part Two. When such instructions are received, the State Society will prepare a letter explaining the procedure to be followed by each doctor working in the program. Fourteen hundred and twenty-five physicians have signified their wish to participate, thus assuring the veteran care in his home community.



# IOWA STATE MEDICAL SOCIETY

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 Richard F. Birge.....Des Moines

### MEDICOLEGAL

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 Arnold L. Jensen, Council Bluffs.....1949  
 George C. Albright, Iowa City.....1948

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# WOMAN'S AUXILIARY NEWS

MRS. KEITH M. CHAPLER, *Chairman of Press and Publicity Committee*, Dexter, Iowa

*President*—MRS. MARION H. BRINKER, Jefferson

*President-Elect*—MRS. FRED MOORE, Des Moines

*Secretary*—MRS. CHARLES A. NICOLL, Panora

*Treasurer*—MRS. HENRY G. DECKER, 2908 Woodland, Des Moines

## REPORT OF FALL EXECUTIVE BOARD MEETING

The Executive Board of the Woman's Auxiliary to the Iowa State Medical Society met in fall conference in the Marquette room of the Hotel Kirkwood October 21. The meeting was called to order by the state president, Mrs. M. L. Brinker of Jefferson. Seventeen members were present. Preceding luncheon the following business was transacted.

The resignation of the third vice president, Mrs. C. M. Franchere of Mason City, was accepted, and Mrs. John Chittum of Wapello was unanimously elected to take her place. Mrs. F. A. Rolfs of Aplington was elected fourth vice president.

Mrs. Fred Moore, president-elect, stressed the importance and the necessity for a concentrated campaign of county organization throughout the state. She recommended that a record be kept of the work done in this direction so that future organization chairmen might learn and profit from it. She was granted \$50 to instigate and carry on such a campaign.

Mrs. Robert L. Parker, legislation chairman, commented on the two immediate items of interest to the medical profession, namely, legalized state examinations for those desiring to do practical nursing and the proposal of a government fund to cover tuberculosis examinations for all individuals.

Mrs. W. A. Seidler, historian, urged that clippings, pictures, and reports of state interest be placed in her hands so that they may be included in the "Dream Book."

Mrs. L. C. Nelson, program chairman, urged that county Auxiliaries adhere to the cancer and handicapped children programs adopted by the State Auxiliary and that they include programs also on *Hygeia* and *The Bulletin*. It was pointed out that interested Auxiliaries might expand their programs by the purchase of glasses, crutches, or other aids for the handicapped in their counties. The state will furnish on request (after investigation) radios for bedridden children desiring schooling in centers where it is available. It costs \$18.75 to send a handicapped child to camp through the services of the Iowa Society for Crippled Children. Such projects add inspiration and unity to Auxiliary work.

Mrs. John W. Veltman, *Hygeia* chairman, and Mrs. E. T. Warren, *Bulletin* chairman, both urged wholehearted support of both magazines among Auxiliary members.

Mrs. S. S. Westly, Public Relations chairman, urged Auxiliary members to contact Dr. E. G. Zimmerer of the State Board of Health for speaking engagements, particularly for lay organizations, on the subject of "Cancer."

Mrs. K. M. Chapler, press chairman, emphasized the need for Auxiliaries to submit reports of meetings or other material of state interest not later than the twelfth of each month.

A recommendation was made by Mrs. Chapler and supported by Mrs. J. A. Downing, parliamentarian, that the revisions committee begin a complete revision of the State Constitution and By-Laws so that they will more nearly conform with the recommended model published in the August, 1946, issue of *The Bulletin*.

Following luncheon, Mrs. W. A. Seidler and Mrs. E. T. Warren were elected to serve with the three directors, Mrs. S. S. Westly, chairman; Mrs. W. S. Reiley; and Mrs. J. C. Decker, on the nominating committee.

Mrs. I. K. Sayre, chairman; Mrs. C. A. Nicoll, Mrs. A. G. Felter, Mrs. H. G. Decker, and Mrs. K. M. Chapler were appointed as a budget committee. Fifty dollars was granted Mrs. Brinker for expenses for six months.

The board expressed its interest in the proposed Youth Guidance Council which would stress finding scientific causes for juvenile delinquency. Mrs. W. A. Seidler was appointed provisory chairman of a committee to investigate and keep in contact with state legislation in this direction.

It was agreed that the 1947 convention should be a forward-looking meeting with a series of energetic and inspiring speakers on varied topics. The consensus leaned toward a one-day meeting coinciding with the doctors' meeting. Visual education was stressed as a part of the program. The plan is to reach each doctor's wife in the state with a personal invitation to attend the convention and to make the program so worthwhile that none can afford to miss it.

Mrs. K. M. Chapler, Press Chairman

## MEMBERS OF STANDING COMMITTEES

### Organization

Mrs. Fred Moore, Des Moines, President-Elect  
Mrs. A. G. Felter, Van Meter, First Vice President  
Mrs. E. H. Sibley, Sioux City, Second Vice President

Mrs. John W. Chittum, Wapello, Third Vice President

Mrs. F. A. Rolfs, Aplington, Fourth Vice President

#### Program

Mrs. Leo C. Nelson, Jefferson, Chairman

Mrs. James A. Swallum, Storm Lake

Mrs. A. S. Bowers, Orient

Mrs. R. E. Gunn, Boone

Mrs. F. V. Johnston, Maquoketa

#### Legislation

Mrs. Robert L. Parker, Des Moines, Chairman

Mrs. C. F. Watts, Marengo

Mrs. H. A. Spilman, Ottumwa

Mrs. P. O. Nelson, Emmetsburg

Mrs. H. L. Vander Stoep, Le Mars

#### Revisions

Mrs. F. W. Mulrow, Cedar Rapids, Chairman

Mrs. W. S. Reiley, Red Oak

Mrs. Jay C. Decker, Sioux City

Mrs. Soren S. Westly, Manly

Mrs. James A. Downing, Des Moines

#### Press and Publicity

Mrs. K. M. Chapler, Dexter, Chairman

Mrs. R. M. Minkel, Fort Dodge

Mrs. R. L. Barnett, Atlantic

Mrs. J. W. McCreery, Whittemore

Mrs. F. G. Ladd, Cedar Rapids

#### Hygeia

Mrs. John F. Veltman, Winterset, Chairman

Mrs. H. M. Pahlas, Dubuque

Mrs. H. C. Bastron, Red Oak

Mrs. Mary Price Roberts, Spirit Lake

Mrs. F. A. Rolfs, Aplington

#### Public Relations

Mrs. Soren S. Westly, Manly, Chairman

Mrs. J. B. Knipe, Armstrong

Mrs. E. L. Kingsbury, Keokuk

Mrs. Arthur C. Brown, Council Bluffs

Mrs. Harold P. Cole, Thurman

#### Bulletin

Mrs. E. T. Warren, Stuart, Chairman

Mrs. L. E. Weber, Wapello

Mrs. M. J. Moes, Dubuque

Mrs. R. G. Hinrichs, Manson

Mrs. G. V. Caughlan, Council Bluffs

#### Nurses Loan Fund

Mrs. W. R. Hornaday, Des Moines, Chairman

Mrs. F. W. Fordyce, Des Moines

Mrs. E. B. Winnett, Des Moines

Mrs. E. M. Kersten, Fort Dodge

Mrs. J. C. Decker, Sioux City

### PUBLIC RELATIONS COMMITTEE

In order to "aid the American Medical Association in every way requested," which is the object of the Woman's Auxiliary, I suggest the following:

1. Have a program with a speaker on cancer.

(Material and a speaker on this subject may be obtained through Dr. Edmund J. Zimmerer, State Department of Health, Des Moines, Iowa.)

2. Have a number on the program for crippled children. (Contact Mrs. Dorothy Phillips in Plymouth Building, Des Moines, for material or a speaker.)

3. Continue to work for the defeat of the Wagner-Murray-Dingell Bill and also work for the successful enactment of the Hill-Burton Bill which would extend health centers and hospital facilities throughout the nation.

4. Influence girls to take up nursing in order to relieve the scarcity in that profession.

Let us present these at our club programs, P.T.A. meetings, or in any other way which reaches the public.

Mrs. S. S. Westly, Chairman  
Public Relations Committee

### DALLAS-GUTHRIE AUXILIARY MEETING

The Dallas-Guthrie Medical Auxiliary met for luncheon with the doctors at the Presbyterian Church in Panora October 17. The Auxiliary attended the first part of the Medical Society meeting to hear Miss Mary McCord, Executive Secretary of the State Society, discuss the "Iowa Medical Service Plans."

Nine members were present at the regular meeting at which the following officers for the coming year were elected: president, Mrs. H. W. Smith, Woodward; president-elect, Mrs. C. R. Osborn, Dexter; first vice president, Mrs. D. W. Todd, Guthrie Center; second vice president, Mrs. C. A. Nicoll, Panora; secretary, Mrs. F. A. Wilke, Perry; treasurer, Mrs. W. V. Thornburg, Guthrie Center.

Mrs. A. G. Felter, *Hygeia* chairman, requested all members to send money for subscriptions to her not later than November 10. Mrs. W. A. Seidler gave a brief report on the proposed hospital plans for Guthrie Center. She explained the youth guidance program which Iowa club women are supporting. She referred specifically to *The Iowa Clubwoman*, September-October, 1946, issue for complete information on this topic.

Arrangements were made for a potluck supper and bridge party honoring the returned medical service men and their wives to be held at the Town Hall in Guthrie Center November 20 at 6:30 p. m.

Mrs. H. W. Smith, Secretary

### BUTLER COUNTY AUXILIARY

The Butler County Medical Auxiliary has been holding regular monthly meetings, preceded by dinner with the doctors, at different towns in the county. There has been an average attendance of seven members. Some of the topics discussed were: "New Vaccines"; "New Hope for Allergies"; book review of "Who Walk Alone" by Perry Burgess; "Polio-myelitis"; and "Penicillin."

Mrs. H. G. MacLeod, Secretary Pro Tem



# THE JOURNAL BOOK SHELF

## BOOKS RECEIVED

- ALLERGY IN PRACTICE**—By Samuel M. Feinberg, M.D., Associate Professor of Medicine and Chief of the Division of Allergy, Northwestern University Medical School; President, American Association for the Study of Allergy, 1942-1943; with the collaboration of OREN C. DURHAM, Chief Botanist, Abbott Laboratories, and CARL A. DRAGSTEDT, Ph.D., M.D., Professor and Chairman of the Department of Pharmacology, Northwestern University Medical School. The Year Book Publishers, Inc., Chicago; Second, Revised Edition, 1946. Price, \$10.50.
- ANNUAL REPRINT OF THE REPORTS OF THE COUNCIL ON PHARMACY AND CHEMISTRY OF THE AMERICAN MEDICAL ASSOCIATION FOR 1945**—with the comments that have appeared in the *Journal*. American Medical Association, Chicago, 1946.
- THE CHEST, A HANDBOOK OF ROENTGEN DIAGNOSIS**—By Leo G. Rigler, M.D., Professor and Chief, Department of Radiology, University of Minnesota. The Year Book Publishers, Inc., Chicago, 1946. Price, \$6.50.
- COMPLETE HANDBOOK ON STATE MEDICINE**—By J. Weston Walch. Platform News Publishing Company, Portland, Me. Price, \$2.50.
- COMPULSION, THE KEY TO COLLECTIVISM**—A treatise on and evidence of attempts to foist on the American people compulsory health insurance, and explanation of the implications involved. Published by the National Physicians Committee, Chicago, 1946. Free upon request.
- THE DIFFERENTIAL DIAGNOSIS OF JAUNDICE**—By Leon Schiff, Ph.D., M.D., Associate Professor of Medicine, Department of Internal Medicine, University of Cincinnati Medical School; Director, Gastric Laboratory, Cincinnati General Hospital. The Year Book Publishers, Inc., Chicago, 1946. Price, \$5.50.
- HYGIENE, A TEXTBOOK FOR COLLEGE STUDENTS ON PHYSICAL AND MENTAL HEALTH FROM PERSONAL AND PUBLIC ASPECTS**—By Florence L. Meredith, B.Sc., M.D., Fellow of the American Psychiatric Associations; Professor of Hygiene and Public Health, Tufts College. Fourth Edition. The Blakiston Company, Philadelphia and Toronto, 1946. Price, \$4.
- INTRACRANIAL COMPLICATIONS OF EAR, NOSE AND THROAT INFECTIONS**—By Hans Brunner, M.D., Associate Professor of Otolaryngology, University of Illinois College of Medicine, Chicago. The Year Book Publishers, Inc., Chicago, 1946. Price, \$6.75.
- MEDICAL USES OF SOAP, A Symposium**—By Rudolf L. Baer, M.D.; Irvin H. Bland, Ph.D.; Theodore Cornbleet, M.D.; Morris Fishbein, M.D.; G. Thomas Halberstadt, B.S.Ch.E.; Lester Hollander, M.D.; Edwin P. Jordan, M.D.; Daniel J. Kooyman, Ph.D.; C. Guy Lane, M.D.; Carey McCord, M.D.; Marion B. Sulzberger, M.D.; J. B. Lippincott Company, Philadelphia, 1946. Price, \$3.
- NEW AND NONOFFICIAL REMEDIES, 1946**, Containing descriptions of the articles which stand accepted by the Council on Pharmacy and Chemistry of the American Medical Association on January 1, 1946. Issued under the direction and supervision of the Council on Pharmacy and Chemistry of the American Medical Association. American Medical Association, Chicago, 1946.
- PENICILLIN, ITS PRACTICAL APPLICATION**—By Sir Alexander Fleming, F.R.C.S., F.R.C.P., F.R.S., Nobel Prize Award, Discoverer of Penicillin; Professor of Bacteriology, University of London, St. Mary's Hospital; and twenty-eight contributors in special fields of medicine.
- PRACTICAL MALARIOLOGY**—Prepared under the auspices of the Division of Medical Sciences of the National Research Council, by PAUL F. RUSSELL, M.D., M.P.H., Colonel, M. C., A. U. S., Parasitology Division, the Army Medical School, Field Staff, International Health Division, Rockefeller Foundation (on leave); LUTHER S. WEST, Ph.D.; Head of Biology Department, Northern Michigan College of Education, Major, Sn.C., A. U. S. (Reserve); formerly Entomologist, Parasitology Division, Army Medical School; REGINALD D. MANWELL, Sc.D., Professor of Zoology, Syracuse University, New York; formerly Captain Sn.C., A.U.S., Protozoology Section, Parasitology Division, Army Medical School. Foreword by RAYMOND B. FOSDICK, President of The Rockefeller Foundation, W. B. Saunders Company, Philadelphia, 1946. Price, \$8.
- A PRIMER FOR DIABETIC PATIENTS**—By Russell M. Wilder, M.D., Ph.D., F. A. C. P., Professor and Chief of the Department of Medicine of the Mayo Foundation, University of Minnesota; Senior Consultant in Division of Medicine, Mayo Clinic. Eighth Edition, Reset. W. B. Saunders Co., Philadelphia, 1946. Price, \$1.75.
- R K G RHEOCARDIOGRAPHY**, A method of Circulation's Investigation and Diagnosis in Circular Motion; From the Nerve-Clinic of the University of Vienna Chief Prof. Dr. Otto Potzl; Information of the Developments Laboratory of the Clinic from the Physiological Institute of the University of Vienna; Leader Dr. Wolfgang Holzer from the Pharmacological Institute of the University of Vienna; Leader Dr. Wolfgang Holzer—By W. HOLZER, K. POLZER, and A. MARKO. Authorized English Translation by Mrs. Emma M. Kreidl, Vienna, former secretary of the A. M. A. of Vienna. Wilhelm Maudrich, Publisher, Vienna, Austria, 1946.
- SEX EDUCATION: A Guide for Parents, Teachers and Youth Leaders**—By Cyril Bibby, M.A., M.Sc., F.L.S. Education Officer to the Central Council of Health Education; Senior Lecturer at the College of St. Mark and St. John, London; sometime scholar of Queen's College, Cambridge. Emerson Books, Inc., New York, 1946. Price, \$2.50.
- SEX PROBLEMS OF THE RETURNED VETERAN**—By Howard Kitching, M.D., Foreword by Ernest R. Groves, Professor of Sociology, University of North Carolina. Emerson Books, Inc., New York, 1946. Price, \$1.50.

## BOOK REVIEWS

### COMPLETE HANDBOOK ON STATE MEDICINE

By J. Weston Walch. Platform News Publishing Company, Portland, Me. Price, \$2.50.

Inasmuch as the national high school debate topic for 1946-47 will be the subject "State Medicine," this volume has been prepared primarily for high school debaters. This is the second time this question has been debated, as the subject was utilized in 1935-36.

The volume covers both sides of the question. It has seven background chapters, giving the history of medical plans at home and abroad; complete briefs for both sides, outlining all the important arguments for and against state medicine; very complete files of evidence, with three hundred and forty-seven quotations for the affirmative and three hundred and forty-four for the negative, covering every possible

phase of the question; and several chapters on debating methods, illustrated by state medicine examples.

E. M. G.

### HYGIENE, A TEXTBOOK FOR COLLEGE STUDENTS ON PHYSICAL AND MENTAL HEALTH FROM PERSONAL AND PUBLIC ASPECTS

By Florence L. Meredith, B.Sc., M.D.,

Fellow of the American Psychiatric Associations; Professor of Hygiene and Public Health, Tufts College. Fourth Edition. The Blakiston Company, Philadelphia and Toronto, 1946. Price, \$4.

This book provides an intelligent yet simple ap-

proach to the problems of physical and mental health which the average individual contacts. The volume's underlying theme, according to the author, is "what health situations exist in the life of individuals and peoples, what health objectives arise from them, and what action is scientifically appropriate on the part of the layman, especially the college student."

Material given in this exceptionally readable text strikes the happy medium of providing enough scientific information to satisfy the reading laity yet in terms simple enough that they are neither burdensome nor confusing.

Under such general headings as "Forces for Health," "The Problem of Infection," "Other Major Health Problems," "Accidents and Poisoning," "The Hygiene of Everyday Life," "Reproduction," and "Mental Health," a limited treatment of virtually every health question that might arise is provided. Likewise, these questions are related not only to the individual but to society as a whole, creating a consciousness of the importance of public health.

The text, because of its scope, makes no pretense of giving the detailed information needed by medical students. Rather, it gives an excellent up-to-date coverage of the information needed and desired by the college student who wishes to know about and utilize his physical and mental capacities for maximum living. Supplementary material includes tables of the chemical composition of American food materials and 100-calorie portions of food.

Well bound and well organized, Dr. Meredith's book can be heartily recommended as a valuable aid to any instructor in whose class it is used as well as a valuable adjunct to the library of the student who chooses to keep it as a permanent reference.

V. M. T.

#### OPHTHALMOLOGY IN THE WAR YEARS, VOLUME I (1940-1943)

Edited by Meyer Wiener, M.D., Professor of Clinical Ophthalmology, Washington University School of Medicine; Honorary Consultant in Ophthalmology, Bureau of Medicine and Surgery, United States Navy. The Year Book Publishers, Inc., Chicago. Price, \$13.50.

One of the many arguments why the medical profession in this country should remain free of political control is a scholarly book recently off the press by the Year Book Publishers, *Ophthalmology in the War Years, Volume I*, edited by Meyer Wiener, M.D., Professor of Clinical Ophthalmology, Washington University School of Medicine.

A group of practitioners and teachers of ophthalmology who were already doing double duty while their colleagues were in the military service assumed the tremendous task of reviewing all the literature obtainable on ophthalmology published throughout the world during the years from 1940 to 1946 inclusive. This review covers Volume I, the work including the literature from 1940 to 1943. The book is well arranged, covering all the literature from em-

bryology of the eye, diseases of the eye and its annexa, surgery, neuro-ophthalmology, and refractions, to systemic diseases as they affect the eye. Each associate editor reviewed the literature covering his assigned phase of the field and in a very concise and condensed form set down the advances in ophthalmology. Each chapter carries a complete bibliography of the literature which makes the book a most practical reference book for seeking subject matter for study and review. The chapter "Hygiene, Sociology, Educational History" with a bibliography of nearly 300 articles serves to show the completeness of the book and emphasizes the fact that the medical profession recognizes its responsibility to society to work with an untiring vigor to prevent blindness throughout the world.

American medicine has always been a living and advancing profession, a truth this book verifies through the chapter on Surgery of the Eye which gives a long list of articles revealing the many advances in that field.

The editor, associate editors, and publishers deserve a great deal of credit for their work, and every student of ophthalmology should have a copy of the book in his library. Total war throughout the world did not stop the ever present urge for a free profession to seek the truth and record it for the benefit of humanity.

J. H. M.

#### A PRIMER FOR DIABETIC PATIENTS

By Russell M. Wilder, M.D., Ph.D., F.A.C.P., Professor and Chief of the Department of Medicine of the Mayo Foundation, University of Minnesota; Senior Consultant in Division of Medicine, Mayo Clinic. Eighth Edition, Reset. W. B. Saunders Co., Philadelphia, 1946. Price, \$1.75.

The first thing the doctor should do when treating a diabetic is to place in his hands a diabetic primer or guide so that the patient may study his disease in order to adequately handle it. Dr. Wilder has pointed out in this admirable primer the necessity of the diabetic understanding his disease and its complications.

The diabetic must know how to care for the diet and insulin, how to examine the urine for sugar, and what to do about it. He must know how to measure and give his own insulin. He must know the various kinds of insulin, learn how to adjust his insulin, and understand the reactions and treatment of each type. The diabetic must realize the necessity of having a card in his pocket telling anyone who might find him in an insulin reaction what to do.

Dr. Wilder has explained in detail how to mix and adjust insulin mixtures. He has explained how to adjust the diet to the doctor's orders. This is very hard to do in a book of any type and requires the help of a dietitian. Many substitutions and recipes are added in the book.

E. B. W.



# SOCIETY PROCEEDINGS

## MEETINGS

### Black Hawk County

The Black Hawk County Medical Society met at Black's Tea Room, Waterloo, November 20 at 6:30 p. m. Dean Lierle, M.D., professor of otolaryngology at the State University of Iowa, spoke on "Lesions of the Mouth." The talk was followed by a round table discussion on problems of the deaf.

### Cerro Gordo County

The Cerro Gordo County Medical Society meeting was held at Hotel Hanford, Mason City, November 12 at 6:30 p. m. A. B. Phillips, M.D., president, presided. J. S. Gottlieb of the State University of Iowa spoke on "The Treatment of Depression." A discussion followed.

### Fayette County

The Fayette County Medical Society met October 24 at 6:30 p. m. in the Pine Lodge, Oelwein, with ten members and five visiting physicians present. Following the dinner, Vernon Madsen, M.D., of Waterloo spoke on "Modern Treatments of Tuberculosis," demonstrating his talk with slide films.

### Johnson County

The Johnson County Medical Society held its regular meeting at Oakdale November 6. A 6:30 o'clock dinner was followed by the business meeting. Richard H. Meade, Jr., M.D., of Chicago, Ill., spoke on "Surgery of Pulmonary Tuberculosis." Discussion was led by R. A. Dorner, M.D., professor in charge of chest surgery, University Hospitals, Iowa City.

### Marshall County

The Marshall County Medical Society met at Binford House in Marshalltown November 5. William D. Paul, M.D., of the physical medicine department at the University of Iowa College of Medicine, spoke on hospital care of poliomyelitis patients. He illustrated his talk with films.

### Montgomery and Page Counties

Montgomery and Page County Societies held their monthly dinner and scientific program on October 17 at the Linderman Hotel, Clarinda. The program topic was "Symposium on Chest Tumors" which was presented by J. Dewey Bisgard, M.D., Howard Hunt, M.D., and John Schenken, M.D., all of Omaha, Neb. All members were present.

### Scott County

The November meeting of the Scott County Medical Society was held at the Lend-a-Hand Club in

Davenport on November 5. Following dinner, a business meeting was held at which the following officers were elected: J. H. Sunderbruch, M.D., president-elect; George W. Cusick, M.D., vice president; Merle J. Brown, M.D., secretary; T. W. McMeans, M.D., treasurer; W. S. Binford, M.D., historian; George Braunlich, M.D., delegate; H. H. Lamb, M.D., alternate; W. C. Goenne, M.D., censor. T. T. Smith, M.D., professor at Creighton University, Omaha, Neb., presented a paper, illustrated by lantern slides, entitled "Diseases of the Esophagus." Discussion followed.

### Washington County

The Washington County Medical Society held its October meeting in Wellman October 24. Following a 6:30 o'clock turkey dinner, Congressman Thomas E. Martin of the First District told of his recent trip to the Philippine Islands, Japan, and Korea. The wives of the members were guests.

## PERSONAL MENTION

Dr. Francis C. Ayers of Columbus, Ohio, plans to locate in Lorimer following the completion of his internship in the Doctor's Hospital, Columbus, January 1.

Dr. Worthey C. Boden, eye, ear, nose and throat specialist, has opened offices for the practice of medicine in Knoxville. A native of that city, he was graduated from the State University of Iowa College of Medicine in 1935. Dr. Boden practiced in Davenport prior to his entrance into the Army Air Corps in which he served two years. During the past year he has been taking postgraduate work at the Presbyterian Hospital, Chicago, Ill.

Lt. Col. Julian M. Bruner of the Army Medical Corps returned October 20 to his home in Des Moines from McCornack General Hospital, Pasadena, Cal., where he had been on special surgical assignment since June. Dr. Bruner, who will be on terminal leave until January 1, plans to resume his practice in Des Moines.

Dr. Grant D. Bullock has become the associate of Dr. S. N. Anderson of Onawa, beginning practice there December 1. Dr. Bullock was formerly located at Cushing.

Dr. L. D. Colbert, formerly of St. Paul, Minn., has announced the opening of offices in the Frank Oliver building in Royal.

**Dr. Ruben H. Flocks** of Iowa City was named to the executive board of the American Urological Association at its recent meeting in Des Moines.

**Dr. August Groman** of Odebolt was honored on his ninetieth birthday at a dinner by the Sac County Medical Society November 7. A life member of the society, he retired in 1932 after having practiced in that town since 1878.

**Dr. Leonard C. Hallendorf** recently arrived in Muscatine to begin the practice of surgery and medicine, associating himself with Drs. W. W. Daut and E. H. Carlson. He has been associated with the Mayo Clinic, Rochester, Minn., the past several years.

**Dr. Jack T. Harris** of LaMar, Colo., has associated himself with Dr. C. F. Watts of Marengo, where he will engage in medical and surgical practice. He is a graduate of the University of Colorado College of Medicine and served in the Army Medical Corps three years.

**Dr. John E. Hartshaw**, formerly chief surgeon of the British Oil Company Hospital in Libitos, Peru, has become associated with Dr. C. L. Heald in the Sigourney Hospital. Dr. Hartshaw, a graduate of the Indiana University School of Medicine, has been in Peru the past ten years except for a leave of absence during which he served as an officer in the Army Medical Corps.

**Dr. John M. Hennessey** has opened offices for the practice of medicine in Manilla. A former resident of Missouri Valley, Dr. Hennessey was released from the Navy Medical Corps in August, 1946.

**Dr. Carl F. Jordan** of the State Department of Health recently attended an international conference for the study of brucellosis at Mexico City, at which he presented a paper on the epidemiology of that disease. Dr. Jordan was one of the two American specialists selected to attend the conference.

**Dr. Alexander P. Stewart** recently retired from practice in Inwood where he had served thirty-seven years. Prior to his coming to Inwood, Dr. Stewart practiced at Rembrandt and Storm Lake. Dr. and Mrs. Stewart left for Ontario, Canada, where they plan to visit friends for an indefinite period of time.

**Dr. E. O. Schlichtemeier** of Nehawka, Neb., has located in Peterson where he plans to practice medicine. A graduate of the University of Nebraska College of Medicine, he was released in July from the Navy Medical Corps.

**Dr. Howard H. Smead** has announced the opening of offices on November 15 in the Shops Building, Des Moines. Dr. Smead is limiting his practice to general surgery.

**Dr. Lloyd J. Sweeney**, formerly of Sioux City, is now assisting Dr. C. Maris of Sanborn in his medical practice. Dr. Sweeney is a graduate of the University of Iowa College of Medicine with the class of 1942. He served in the armed forces three years, receiving his discharge in July, 1946.

**Dr. Norman West** has joined Dr. C. C. Huntley in the practice of medicine and surgery in Avoca. A native of Avoca, Dr. West was graduated from the Creighton University School of Medicine in 1943 and following his internship served two years in the Army Medical Corps.

**Dr. Ralph L. Wicks** has announced a change in the location of his offices to the Boone Clinic where he will be associated with Dr. John C. Herman and Dr. N. M. Whitehill.

#### MARRIAGE ANNOUNCEMENT

**Dr. Roy H. Mortimore** of Lamoni announces the marriage of his daughter, Betsy Mortimore Harpley, to Dr. John S. Downing, son of Dr. L. M. Downing of Cedar Rapids. A double ring ceremony was performed October 20 in the Presbyterian Church, Grinnell, Iowa. Mrs. Downing is a graduate of Iowa State College and finished her dietetics internship in the Nutrition Department of the State University of Iowa. She will finish graduate work in nutrition this year. Dr. Downing is a graduate of the State University of Iowa College of Medicine. He served as flight surgeon in the Army Air Forces four and one-half years and is now a resident in the pediatric department of the Children's Hospital, Iowa City. Dr. and Mrs. Downing are at home at 1 Bellavista Place, North Linn Street, Iowa City.

#### DEATH NOTICES

**Eischeid, Rudolph John**, of Dubuque, aged 63, died at his home October 25 following an extended illness. He was graduated from the Chicago College of Medicine and Surgery in 1913. He retired from active practice in 1944 following service in Dubuque and New Albin.

**Fenlon, Leslie Knapp**, of Clinton, aged 53, died October 28 at his home following a heart attack. He was graduated from the State University of Iowa College of Medicine, Iowa City, in 1919, and at the time of his death was a member of the Clinton County and Iowa State Medical Societies.

**Yavorsky, William Daniel**, aged 36, formerly of Cedar Rapids, died in a San Francisco naval hospital of poliomyelitis October 18. Dr. Yavorsky was a graduate of the State University of Iowa College of Medicine, Iowa City, with the class of 1935. He was a member of the Linn County and the Iowa State Medical Societies at the time of his death.















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